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STATE OF NEW HAMPSHIRE

REPORTS, 1914

VOLUME IV—BIENNIAL

CONCORD, N. H.
1914

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REPORT OF THE STATE BOARD OF HEALTH.

REPORT OF THE REGISTRAR OF VITAL STATISTICS.

REPORT OF THE COMMISSIONERS OF LUNACY.

REPORT OF THE STATE LIBRARIAN.

REPORT OF THE PUBLIC SERVICE COMMISSION.

TWENTY-FOURTH REPORT
(TENTH BIENNIAL)
RELATING TO THE
REGISTRATION AND RETURN
OF
BIRTHS, MARRIAGES
DIVORCES AND DEATHS
IN
NEW HAMPSHIRE
FOR THE YEARS 1912 AND 1913

VOLUME XXI, NEW SERIES

CONCORD, NEW HAMPSHIRE

PRINTED BY
THE RUMFORD PRINTING Co.
CONCORD, N. H.

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STATE BOARD OF HEALTH.

Gov. SAMUEL D. FELKER, Rochester.

ATT'Y-GEN. JAMES P. TUTTLE, Manchester.

ROBERT FLETCHER, C. E., *President*, Hanover.

FRANK E. KITTREDGE, M. D., Nashua.

D. E. SULLIVAN, M. D., Concord.

IRVING A. WATSON, M. D., *Secretary*, Concord.

THE STATE OF NEW HAMPSHIRE.

OFFICE OF THE REGISTRAR OF VITAL STATISTICS.

CONCORD, September 1, 1914.

To His Excellency the Governor and the Honorable Council:

I have the honor to submit herewith, in accordance with the laws of the State of New Hampshire, the twenty-fourth report relating to the registration of births, marriages, divorces and deaths, in this state for the years ending December 31, 1912 and December 31, 1913.

Respectfully submitted,

Irving A. Watson

Registrar of Vital Statistics.

REGISTRATION REPORT.

RETURNS FOR 1912 AND 1913.

Herewith is rendered a statistical return of births, marriages, divorces and deaths, as made to the department of vital statistics for the calendar years 1912 and 1913.

In addition thereto there is a summary, commencing with Table No. 17, showing certain features of similar returns for the past thirty years: since such statistics have been of sufficient completeness to be of value. Most of the computations are based upon an estimated population, except for the census years.

The number of births, marriages, divorces and deaths returned to the state for the years 1912 and 1913 was as follows:

	1912.	1913.	Increase.	Decrease.
Births.....	9133	9236	103	
Marriages.....	4104	4292	188	
Divorces.....	641	620		21
Deaths.....	7147	7475	328	

The proportion of births, marriages, divorces and deaths to each 1,000 of the population* for the two years mentioned was:

Year.	Births.	Marriages.	Deaths.
1912.....	21.02	9.44 (couples)	16.45
1913.....	21.17	9.83 (couples)	17.13

* Population estimated.

TABLE OF BIRTHS, MARRIAGES,
DIVORCES AND DEATHS,
1912.

Table
Births, Marriages, and Deaths for
Rockingham

TOWNS.	Population in 1910.	BIRTHS.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Atkinson.....	440	1	1	..	2	4.54	2	..	..	..	..
Auburn.....	637	6	6	..	12	18.83	9	3	..	..	..
Brentwood.....	759	8	8	..	16	21.08	9	2	2	2	1
Candia.....	993	6	4	..	10	10.07	7	2	1	..	..
Chester.....	818	1	6	..	7	8.55	7	..	..	..	..
Danville.....	517	1	3	..	4	7.73	3	..	..	1	..
Deerfield.....	917	5	6	..	11	11.99	10	1	..	..	..
Derry.....	5,123	57	36	..	93	18.15	46	16	16	15	..
East Kingston.....	413	1	6	..	7	16.94	7	..	..	..	..
Epping.....	1,649	15	17	..	32	19.40	14	13	5	..	..
Exeter.....	4,897	72	68	..	140	28.58	76	45	5	11	3
Fremont.....	622	7	3	..	10	16.07	9	1	..	..	..
Greenland.....	575	7	7	..	14	24.34	8	2	2	2	..
Hampstead.....	796	8	5	..	13	16.33	9	2	2	..	..
Hampton.....	1,215	7	4	..	11	9.05	11	..	..	..	..
Hampton Falls.....	552	3	4	..	7	12.68	6	..	1	..	..
Kensington.....	417	..	3	..	3	7.19	2	1	..	..	..
Kingston.....	1,015	4	3	..	7	6.89	7	..	..	..	..
Londonderry.....	1,533	18	11	..	29	18.91	18	5	1	3	2
Newcastle.....	624	4	5	..	9	14.42	8	..	1	..	..
Newfields.....	503	2	1	..	3	5.96	2	1	..	..	..
Newington.....	296	1	..	..	1	3.37	..	1	..	..	..
Newmarket.....	3,348	43	50	..	93	27.77	19	54	6	14	..
Newton.....	962	4	5	..	9	9.35	5	1	1	1	1
North Hampton.....	783	..	7	..	7	8.94	4	..	1	2	..
Northwood.....	1,059	10	15	..	25	23.60	25	..	..	..	..
Nottingham.....	607	4	8	..	12	19.76	8	1	3	..	..
Plaistow.....	1,173	14	6	..	20	17.05	13	3	2	2	..
Portsmouth.....	11,269	138	126	..	264	23.42	126	90	19	26	3
Raymond.....	1,203	5	5	..	10	8.31	8	1	..	1	..
Rye.....	1,014	3	1	..	4	3.94	3	..	1	..	..
Salem.....	2,117	15	13	..	28	13.22	19	7	1	1	..
Sandown.....	380	..	6	..	6	15.78	4	..	1	1	..
Seabrook.....	1,425	24	16	..	40	28.07	37	1	1	1	..
South Hampton.....	279	1	3	..	4	14.33	3	1	..	..	..
Stratham.....	602	3	1	..	4	6.64	2	..	..	2	..
Windham.....	656	2	2	..	4	6.09	3	1	..	..	..
Total.....	52,188	500	471	..	971	18.60	549	255	72	85	10

No. 1.*

the year ending December 31, 1912.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
1					1	3	2		5	5			11.36
1					1	7	1		8	7	1		12.55
3					3	31	7		†38	28	7	3	10.54
8			2		10	12	7		19	17	2		19.13
2					2	6	2		8	8			9.77
6					6	2	4		6	5	1		11.60
3		2			5	13	5		18	17	1		19.62
37	3	5	4		49	39	26		65	52	9	4	12.68
5					5	5	3		8	6	1	1	19.37
5	2	3			10	10	12		22	20	2		13.34
20	16	3	6		45	40	53		93	76	15	2	18.99
6					6	3	5		8	8			12.86
2		1			3	5	9		14	13		1	24.34
2					2	7	7		14	10	1	3	17.58
10					10	17	7		24	23	1		19.75
1					1	2	6		8	8			14.49
2			1		3	4	4		8	7	1		19.18
7		1	2		10	11	10		21	20	1		20.67
7		1			8	11	11		22	18	4		14.35
3				1	4	7	8		15	11	2	2	24.03
7					7	7	7		14	7	4	3	27.83
1					1	7	3		10	5	2	3	33.78
14	17	1	7		39	18	34		52	32	17	3	15.53
5					5	8	6		14	11	3		14.55
1					1	3	3		6	4		2	7.66
15		2	1		18	11	8		19	17		2	17.94
3					3	7	3		10	9		1	16.47
11		3	2		16	7	14		21	20	1		17.90
110	19	18	10		157	110	91		201	160	37	4	17.83
4					4	12	12		24	23	1		19.95
4					4	5	6		11	11			10.84
13		4	1	1	19	17	14		31	25	5	1	14.64
2		1			3	4	3		7	6	1		18.42
15	1	1	1		18	14	9		23	23			16.14
1			1		2	2			2	2			7.16
1			1		2	4	4		8	8			13.28
4		1			5	6	3		9	5	1	3	13.71
342	58	47	39	2	488	477	409	....	886	727	121	38	16.97

* Deaths occurring at County Farms and public institutions have been deducted from total number of deaths in making computations of death rate per 1,000.

† Died at County Farm, 30.

Table
Births, Marriages, and Deaths for
Strafford

TOWNS.	Population in 1910.	BIRTHS.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Barrington.....	900	5	9	..	14	15.55	14	..	..	..	..
Dover.....	13,247	116	131	..	247	18.64	104	89	28	21	5
Durham.....	823	7	3	..	10	12.15	4	3	..	2	1
Farmington.....	2,621	30	22	..	52	19.83	42	3	4	2	1
Lee.....	479	6	2	..	8	16.70	7	..	1	..	..
Madbury.....	331	..	2	..	2	6.03	2	..	..	..	..
Middleton.....	291	4	3	..	7	24.05	6	1	..	..	..
Milton.....	1,542	13	11	..	24	15.56	23	..	1	..	..
New Durham.....	523	4	6	..	10	19.12	9	1	..	..	..
Rochester.....	8,868	97	92	..	189	21.31	101	41	26	17	4
Rollinsford.....	1,836	26	21	..	47	25.59	8	28	4	5	2
Somersworth.....	6,704	91	81	..	172	25.65	28	103	19	21	1
Strafford.....	786	5	1	..	6	7.63	4	..	..	2	..
Total.....	38,951	404	384	..	788	20.23	352	269	83	70	14

No. 1.—*Continued.*

the year ending December 31, 1912.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
3	.....	.....	2	.....	5	8	11	.....	19	18	.....	1	21.11
92	16	19	21	1	149	120	143	.....	*263	195	59	9	15.55
2	.....	1	1	.....	4	5	7	.....	12	10	2	.....	14.58
25	1	2	1	.....	29	29	18	.....	47	42	4	1	17.89
4	.....	.....	.....	.....	4	6	3	.....	9	8	1	.....	18.78
2	.....	.....	.....	.....	2	1	1	.....	2	2	.....	.....	6.03
1	.....	.....	.....	.....	1	1	.....	.....	1	1	.....	.....	3.43
11	.....	.....	3	.....	14	12	11	.....	23	21	1	1	14.91
1	.....	1	.....	.....	2	6	3	.....	9	9	.....	.....	17.20
60	6	6	17	.....	89	63	70	.....	133	105	20	8	14.99
9	2	3	5	.....	19	9	17	.....	26	18	7	1	14.16
18	24	10	7	.....	59	42	59	.....	101	71	28	2	15.06
4	.....	.....	.....	.....	4	8	12	.....	20	20	.....	.....	25.44
232	49	42	57	1	381	310	355	.....	665	520	122	23	17.07

* Died at County Farm, 18; at public institutions, 39.

Table
Births, Marriages, and Deaths for
Belknap

TOWNS.	Population in 1910.	BIRTHS.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Alton.....	1,348	4	9	..	13	9.64	11	1	1	..	..
Barnstead.....	1,081	11	4	..	15	13.87	11	2	..	2	..
Belmont.....	1,390	12	9	..	21	15.10	15	4	1	1	..
Centre Harbor.....	420	3	4	..	7	16.66	5	..	..	2	..
Gilford.....	744	3	10	..	13	30.95	10	2	..	..	1
Gilmanton.....	968	4	7	..	11	11.36	10	1	..	..	..
Laconia.....	10,183	127	110	..	237	23.27	106	64	25	38	4
Meredith.....	1,638	20	12	..	32	19.53	27	..	1	3	1
New Hampton.....	821	5	5	..	10	12.17	9	1	..	..	..
Sanbornton.....	850	4	6	..	10	11.76	10	..	..	..	..
Tilton.....	1,866	17	15	..	32	17.13	20	4	2	5	1
Total.....	21,309	210	191	..	401	18.81	234	79	30	51	7

No. 1.—*Continued.*

the year ending December 31, 1912.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
7	.....	1	.....	.....	8	16	12	.....	28	26	1	1	20.77
7	1	1	.....	.....	9	3	4	.....	7	7	.....	.....	6.47
.....	.....	2	.....	.....	2	3	7	.....	10	9	1	.....	7.19
.....	.....	.....	.....	.....	.....	2	.....	.....	2	1	1	.....	4.88
3	1	1	.....	.....	5	10	3	.....	13	13	.....	.....	30.95
4	.....	.....	1	.....	5	12	7	.....	19	15	1	3	19.62
52	17	18	9	.....	96	109	78	.....	*187	157	25	5	15.51
12	.....	2	1	.....	15	17	11	.....	28	22	1	5	17.09
2	.....	.....	.....	.....	2	7	13	.....	20	16	1	3	24.34
3	.....	.....	1	.....	4	5	6	.....	11	8	1	2	12.94
11	1	2	1	.....	15	26	21	.....	47	37	5	5	25.18
101	20	27	13	.....	161	210	162	.....	372	311	37	24	17.45

* Died at County Farm, 12; at public institutions, 17.

Table
Births, Marriages, and Deaths for
Carroll

TOWNS.	Population in 1910.	BIRTHS.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Albany.....	289	3	.....	..	3	10.38	2	.....	1	.....	.....
Bartlett.....	1,197	23	9	..	32	26.73	23	4	1	3	1
Brookfield.....	247	1	5	..	6	24.28	6	.....	.....	.....	.....
Chatham.....	209	1	.....	..	1	4.78	.....	.....	1	.....	.....
Conway.....	3,413	24	27	..	51	14.94	35	4	7	5	.....
Eaton.....	380	3	.....	..	3	7.89	3	.....	.....	.....	.....
Effingham.....	558	4	4	..	8	14.33	5	3	.....	.....	.....
Freedom.....	542	3	4	..	7	12.91	7	.....	.....	.....	.....
Hart's Location.....	85	.....	2	..	2	23.54	.....	1	.....	1	.....
Jackson.....	452	2	1	..	3	6.63	3	.....	.....	.....	.....
Madison.....	507	8	5	..	13	25.64	11	1	.....	1	.....
Moultonborough.....	783	4	7	..	11	14.04	11	.....	.....	.....	.....
Ossipee.....	1,354	9	10	..	19	14.03	15	.....	1	.....	3
Sandwich.....	928	1	7	..	8	8.62	7	.....	.....	1	.....
Tamworth.....	993	6	8	..	14	14.09	12	.....	.....	2	.....
Tuftonborough.....	612	2	10	..	12	19.60	11	.....	.....	1	.....
Wakefield.....	1,543	21	17	..	38	24.62	28	6	1	2	1
Wolfeboro.....	2,224	16	3	..	19	8.54	13	3	.....	2	1
Total.....	16,316	131	119	..	250	15.32	192	22	12	18	6

No. 1.—*Continued.*

the year ending December 31, 1912.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
1					1	2	1		3	2		1	10.38
8		1	1		10	13	6		19	17	1	1	15.87
						3	1		4	4			16.19
2					2	2			2	2			9.56
31	2	2	5		40	19	17		36	32	3	1	10.54
4					4	1	1		2	2			5.25
2			1		3	5	4		9	9			16.12
2					2	2	4		6	6			11.07
2		1			3	4	1		5	4		1	11.06
7					7	6			6	4	1	1	11.83
8					8	6	3		9	9			11.49
17		1		1	19	22	13		*35	21	2	12	17.72
3		1			4	12	5		17	15	1	1	18.31
7		2			9	6	13		19	15	3	1	19.13
		1			1	4	7		11	11			17.97
9		2	1		12	10	8		18	17		1	11.66
20		1			21	26	13		39	31	3	5	17.53
123	2	12	8	1	146	143	97		240	201	14	25	14.70

* Died at County Farm, 11.

Table
Births, Marriages, and Deaths for
Merrimack

TOWNS.	Population in 1910.	BIRTHS.								
		Sex.					Parentage.			
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.
Allenstown.....	1,457	22	23	..	45	30.88	9	20	8	8
Andover.....	1,201	5	10	..	15	12.48	11	..	1	1
Boscawen.....	1,240	13	14	..	27	21.77	16	2	4	1
Bow.....	676	2	5	..	7	10.35	3	2	1	1
Bradford.....	695	6	2	..	8	11.51	7	..	..	1
Canterbury.....	680	3	1	..	4	5.88	4	..	..	..
Chichester.....	606	4	4	..	8	13.20	7	1	..	..
Concord.....	21,497	198	180	..	378	17.58	182	105	42	42
Danbury.....	592	5	3	..	8	13.51	7	..	..	1
Dunbarton.....	513	6	4	..	10	19.49	8	1	..	1
Epsom.....	725	4	6	..	10	13.79	7	2	1	..
Franklin.....	6,132	65	65	..	130	21.20	53	41	19	13
Henniker.....	1,395	16	12	..	28	20.07	25	2	1	..
Hill.....	556	2	3	..	5	8.99	4	..	1	..
Hooksett.....	1,528	14	16	..	30	19.63	13	6	4	7
Hopkinton.....	1,578	12	12	..	24	15.20	18	2	..	4
Loudon.....	838	4	2	..	6	7.15	4	..	..	1
Newbury.....	402	2	2	..	4	9.95	3	..	..	1
New London.....	805	4	13	..	17	21.11	10	1	4	1
Northfield.....	1,474	11	9	..	20	13.56	14	3	2	1
Pembroke.....	3,062	36	41	..	77	25.14	20	36	9	12
Pittsfield.....	2,222	15	18	..	33	14.85	23	5	1	1
Salisbury.....	478	3	2	..	5	10.46	5	..	..	..
Sutton.....	698	10	4	..	14	20.05	12	..	1	1
Warner.....	1,226	8	7	..	15	12.23	10	1	2	2
Webster.....	445	2	4	..	6	13.48	6	..	..	..
Wilmot.....	614	4	3	..	7	11.40	4	..	1	2
Total.....	53,335	476	465	..	941	17.64	485	230	102	102

No. 1.—Continued.

the year ending December 31, 1912.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
3	4	3	1	...	11	7	4	...	11	11	...	...	7.54
11	...	1	...	...	12	9	7	...	16	14	2	...	13.32
4	...	2	...	...	6	24	12	...	*36	26	10	...	14.51
3	...	...	...	...	3	1	2	...	3	1	1	1	4.43
3	...	...	...	...	3	4	3	...	7	7	...	...	10.07
4	...	...	...	...	4	2	7	...	9	5	1	3	13.23
1	...	1	...	...	2	7	3	...	10	8	2	...	16.50
110	21	20	19	...	170	240	210	...	†450	337	97	16	11.16
9	...	...	...	...	9	3	6	...	9	7	1	1	15.20
2	...	...	...	...	2	...	3	...	3	2	1	...	5.84
4	...	...	1	...	5	5	7	...	12	12	...	...	16.55
28	11	8	5	...	52	34	44	...	†78	50	24	4	11.41
11	...	1	1	...	13	6	12	...	18	15	2	1	12.90
2	...	1	1	...	4	4	3	...	7	7	...	...	12.58
3	1	3	5	...	12	13	11	...	24	19	5	...	15.70
11	...	...	1	...	12	12	15	...	27	26	...	1	17.11
7	...	1	...	...	8	8	4	...	12	12	...	...	14.30
2	...	...	...	...	2	2	5	...	7	7	...	...	17.41
8	1	...	...	1	10	8	9	...	17	17	...	...	21.11
10	...	...	...	...	10	7	10	...	17	12	5	...	11.53
4	7	5	5	...	21	26	26	...	52	36	15	1	16.97
11	3	4	1	...	19	13	22	...	35	27	7	1	15.75
...	...	...	...	...	...	5	4	...	9	6	2	1	18.82
4	...	1	...	...	5	7	6	...	13	12	1	...	18.62
11	...	...	...	1	12	9	7	...	16	15	...	1	13.05
1	...	...	...	...	1	3	3	...	6	6	...	...	13.48
2	...	...	...	...	2	8	3	...	11	8	3	...	17.91
269	48	51	40	2	410	467	448	....	915	705	179	31	17.15

* Died at County Farm, 18.

† Died at public institutions, 210.

‡ Died at public institutions, 8.

Table

Births, Marriages, and Deaths for

Hillsborough

TOWNS.	Population in 1910.	BIRTHS.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and for- eign father.	American father and for- eign mother.	Not stated.
Amherst.....	1,060	6	5	..	11	10.37	7	..	2	2	..
Antrim.....	1,235	6	8	..	14	11.33	6	2	2	4	..
Bedford.....	1,110	10	6	..	16	14.41	6	6	2	1	1
Bennington.....	690	2	12	..	14	20.28	6	4	3	1	..
Brookline.....	501	4	7	..	11	21.95	7	2	1	1	..
Deering.....	353	2	3	..	5	14.16	4	..	1	..	..
Francestown.....	602	5	3	..	8	13.28	7	..	1	..	..
Goffstown.....	2,579	18	21	..	*39	15.12	22	3	4	3	7
Greenfield.....	574	6	5	..	11	19.16	9	1	..	..	1
Greenville.....	1,374	17	13	..	30	21.83	10	11	3	6	..
Hancock.....	642	5	6	..	11	17.13	6	..	4	..	1
Hillsborough.....	2,168	12	12	..	24	11.07	15	4	2	2	1
Hollis.....	935	6	5	..	11	11.76	7	..	3	1	..
Hudson.....	1,344	11	12	..	23	17.11	17	1	3	2	..
Litchfield.....	255	..	4	..	4	15.68	2	..	..	2	..
Lyndeborough.....	660	8	6	..	14	21.21	12	..	2	..	..
Manchester.....	70,063	1,038	1,011	..	2,049	29.24	411	1182	227	193	36
Mason.....	325	1	1	..	2	6.15	2	..	..	..	..
Merrimack.....	1,039	3	7	..	10	9.62	8	..	1	1	..
Milford.....	3,939	42	31	..	73	18.53	22	40	6	5	..
Mont Vernon.....	413	3	..	..	3	7.26	2	1	..	..	..
Nashua.....	26,005	317	299	..	616	23.68	171	321	53	55	16
New Boston.....	982	8	3	..	11	11.20	8	..	1	..	2
New Ipswich.....	927	6	5	..	11	11.86	..	9	1	1	..
Pelham.....	826	11	9	..	20	24.21	12	2	1	5	..
Peterborough.....	2,277	20	20	..	40	17.56	20	11	5	4	..
Sharon.....	71	..	..	..	..	..	..	..	..	..	..
Temple.....	284	3	1	..	4	14.08	3	1	..	..	..
Weare.....	1,325	13	11	..	24	18.11	20	2	1	1	..
Wilton.....	1,490	7	10	..	17	11.40	7	2	1	7	..
Windsor.....	24	1	..	..	1	41.66	1	..	..	..	..
Total.....	126,072	1,591	1,536	..	3,127	24.80	830	1605	330	297	65

* Born at County Farm, 8.

No. 1.—Continued.

the year ending December 31, 1912.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
5			1		6	9	10		19	18	1		18.09
14			2		16	12	10		22	19	1	2	17.82
2		1			3	5	6		11	8	3		9.90
2	1				3	12	7		19	16	2	1	27.53
3					3	3	3		6	6			11.97
1					1		3		3	3			8.49
1			1		2	6	2		8	8			13.28
10		1			11	84	56		*140	83	52	5	17.44
2			1		3	5	1		6	4	1	1	10.45
2	2	2	6		12	5	10		15	13	2		10.91
1					1	4	2		6	4	2		9.34
19	1	1	2		23	13	9		22	18	3	1	10.14
2					2	4	4		8	8			8.55
11			1		12	16	12		28	25	3		20.83
						2	3		5	5			19.60
5		1			6	4	8		12	12			18.18
252	348	99	111		810	560	554		†1,114	759	346	9	13.08
1		1			2	2	2		4	2	1	1	12.30
6					6	9	8		17	15	1	1	16.36
12	6	2	4		24	33	17		50	37	12	1	12.69
		1			1	4	4		8	8			19.37
189	123	37	62		411	189	206	1	†396	269	122	5	12.11
3	1	1			5	2	6		8	8			8.14
4	2		2		8	5	9		14	13	1		15.10
10		4			14	5	4		9	7	2		10.89
14	1	2	1		18	19	21		40	40			17.56
		1			1								
						3	2		5	5			17.60
7		3	1		11	18	11		29	27	2		21.88
7	2		3		12	14	11		25	21	4		16.77
585	487	157	198		1,427	1,047	1,001	1	2,049	1,461	561	27	16.25

* Died at County Farm, 95.

† Died at public institutions, 197.

‡ Died at public institutions, 81.

No. 1.—Continued.

the year ending December 31, 1912.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
5	1	1			7	9	5		14	13		1	19.69
3					3	7	1		8	7		1	10.38
1					1	2	1		3	3			5.25
5	2	1			8	6	5		11	10	1		9.58
1					1	4	3		7	7			14.89
5	4	1			10	3	8		11	8	2	1	17.65
15		1	2		18	16	13		29	21	6	2	17.33
7	2	3			12	18	15		33	27	5	1	17.41
91	9	14	9		123	85	102		†187	140	34	13	15.49
11	2	3	2		18	11	14		25	23	2		16.91
						2	3		5	3		2	11.76
1					1		1		1	1			4.32
						3	3		6	5	1		15.26
1			1		2	6	2		8	5	1	2	11.33
1					1	2			2	1		1	30.30
1					1	1	1		2	2			7.78
2					2	2	4		6	5		1	22.55
						2	1		3	1	2		14.08
7	1	1	1		10	12	10		22	19	1	2	13.28
8	1	1	2		12	11	11		22	14	8		16.52
21	1				22	25	16		41	24	15	2	15.36
2					2	12	9		*21	13	5	3	10.55
12	7	3	3		25	18	14		32	23	6	3	14.02
200	30	29	20		279	257	242		499	375	89	35	16.27

† Died at County Farm, 13.

* Died at public institutions, 31.

Table
Births, Marriages, and Deaths for
Sullivan

TOWNS.	Population in 1910.	BIRTHS.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Acworth.....	536	10	7	..	17	31.71	16	....	....	....	1
Charlestown.....	1,496	9	12	..	21	14.03	17	1	1	2	....
Claremont.....	7,529	89	74	..	163	21.64	76	47	21	14	5
Cornish.....	1,005	12	6	..	18	17.91	12	3	....	1	2
Croydon.....	324	2	....	..	2	6.17	1	....	....	1	....
Goshen.....	329	2	4	..	6	18.23	2	1	1	2	....
Grantham.....	286	4	3	..	7	24.47	6	....	....	....	1
Langdon.....	340	3	5	..	8	23.52	6	1	....	....	1
Lempster.....	383	1	2	..	3	7.83	2	....	....	1	....
Newport.....	3,765	37	31	..	68	18.06	37	23	2	5	1
Plainfield.....	987	2	6	..	8	8.11	7	....	....	1	....
Springfield.....	422	3	5	..	8	18.95	5	1	2	....	....
Sunapee.....	1,071	8	6	..	14	13.07	11	1	1	1	....
Unity.....	504	7	2	..	9	17.85	4	3	1	1	....
Washington.....	360	6	3	..	9	24.99	5	....	1	2	1
Total.....	19,337	195	166	..	361	18.66	207	81	30	31	12

No. 1.—*Continued.*

the year ending December 31, 1912.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
2	.....	1	1	....	4	3	4	....	7	7	.....	....	13.05
11	2	1	1	....	15	15	21	....	36	28	6	2	24.06
63	18	12	11	....	104	59	70	....	129	96	29	4	17.13
1	1	.....	1	....	3	4	4	....	8	8	.....	....	7.96
1	.....	.....	.....	....	1	3	1	....	4	4	.....	....	12.34
.....	.....	.....	.....	.....	.....	2	3	....	5	4	1	....	15.19
3	.....	.....	.....	....	3	2	.....	....	2	2	.....	....	6.99
1	.....	.....	.....	....	1	3	1	....	4	4	.....	....	11.76
1	.....	.....	.....	....	1	1	6	....	7	7	.....	....	18.27
48	17	7	4	2	78	38	41	....	79	70	7	2	20.98
5	.....	1	.....	....	6	12	7	....	19	18	1	....	19.24
2	.....	.....	.....	....	2	4	7	....	11	9	1	1	26.06
12	.....	2	1	....	15	11	7	....	18	18	.....	....	16.80
2	.....	.....	.....	....	2	14	6	....	*20	15	3	2	27.77
6	.....	1	.....	....	7	1	2	....	3	3	.....	....	8.33
158	38	25	19	2	242	172	180	....	352	293	48	11	18.20

* Died at County Farm, 6.

Table

Births, Marriages, and Deaths for
Grafton

TOWNS.	Population in 1910.	BIRTHS.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Alexandria.....	571	3	5	..	8	14.01	6	..	..	..	2
Ashland.....	1,412	17	10	..	27	19.12	18	4	3	2	..
Bath.....	978	6	7	..	13	13.29	11	..	1	1	..
Benton.....	219	..	1	..	1	4.56	1	..	..	..	..
Bethlehem.....	1,201	7	8	..	15	12.48	5	3	3	4	..
Bridgewater.....	187	1	1	..	2	10.68	2	..	..	..	..
Bristol.....	1,478	8	21	..	29	19.62	24	2	1	1	1
Campton.....	845	2	3	..	5	5.91	3	..	..	1	1
Canaan.....	1,408	13	15	..	28	19.88	22	1	5	..	..
Dorchester.....	241	..	2	..	2	8.29	..	..	..	2	..
Easton.....	226	..	1	..	1	4.42	1	..	..	..	..
Ellsworth.....	46	3	..	..	3	65.21	3	..	..	..	..
Enfield.....	1,448	16	7	..	23	15.88	17	3	2	1	..
Franconia.....	504	1	2	..	3	5.95	1	1	1	..	..
Grafton.....	641	6	6	..	12	18.72	9	..	..	2	1
Groton.....	319	1	2	..	3	9.40	1	..	..	1	1
Hanover.....	2,075	32	22	..	54	26.02	39	4	2	8	1
Haverhill.....	3,498	36	30	..	66	18.86	44	7	9	3	3
Hebron.....	213	..	2	..	2	9.38	1	1	..	..	..
Holderness.....	652	7	6	..	13	19.93	9	1	..	1	2
Landaff.....	526	8	6	..	14	26.61	11	2	1	..	..
Lebanon.....	5,718	66	50	..	116	20.28	61	25	14	13	3
Lincoln.....	1,278	19	14	..	33	25.81	10	17	3	3	..
Lisbon.....	2,460	19	16	..	35	14.22	25	3	4	2	1
Littleton.....	4,069	56	48	..	104	25.55	52	18	16	17	1
Livermore.....	64	1	1	..	2	31.24	..	2	..	..	..
Lyman.....	374	4	4	..	8	21.39	7	..	1	..	..
Lyme.....	1,007	7	8	..	15	14.89	11	..	2	1	1
Monroe.....	429	4	3	..	7	16.31	6	..	1	..	..
Orange.....	176	4	3	..	7	39.77	6	..	1	..	..
Orford.....	799	8	6	..	14	17.52	11	2	1	..	..
Piermont.....	592	7	3	..	10	16.89	10	..	..	..	..
Plymouth.....	2,200	15	21	..	36	16.36	26	2	2	4	2
Rumney.....	850	8	13	..	21	24.70	14	3	1	3	..
Thornton.....	553	8	10	..	18	32.54	12	..	4	1	1
Warren.....	701	4	8	..	12	17.11	7	1	3	1	..
Waterville.....	16	..	..	..	..	..	..	..	..	..	..
Wentworth.....	595	7	6	..	13	21.84	10	..	2	..	1
Woodstock.....	1,083	7	13	..	20	18.46	7	6	6	1	..
Total.....	41,652	411	384	..	795	19.08	503	108	89	73	22

No. 1.—Continued.

the year ending December 31, 1912.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
6	2	1			9	2	5		7	6		1	12.25
2					2	12	14		26	20	4	2	18.41
			1		1	3	4		7	6	1		7.15
11		4		1	16	5	2		7	6	1		31.96
2					2	8	7		15	10	3	2	12.48
10			1		11	1	1		2	2			10.68
3		2			5	9	14		23	21	1	1	15.56
3		3			6	5	6		11	11			13.01
						14	9		23	19	4		16.33
							4		4	4			16.59
						2	2		4	4			17.69
10	1	2	1		14	2			2	2			43.47
3					3	12	15		27	22	3	2	18.64
3					3	3	1		4	4			7.93
			1		1	10	8		18	13	3	2	28.08
12		3			17	3			3	1	1	1	9.40
23	3	3	4		33	30	25		55	42	5	8	26.50
1					1	39	33		*72	61	5	6	14.57
3					3	2	2		4	2	1	1	18.77
2					3	6	4		10	9	1		15.33
28	3	6	7		44	3	7		10	10			19.01
4	5	1	1		11	40	47		87	72	9	6	15.21
12		1	4		17	11	3		14	8	5	1	10.95
31	3	10	6		50	12	12		40	32	6	2	16.26
						44	36		80	56	23	1	19.66
2					2	1	1		2		2		5.34
5		1			6	10	5		15	15			14.89
2			1		3	5	2		7	7			16.31
2					2	7	1		8	5	1	2	45.45
5					5	4	4		8	7	1		10.01
8					8	4	3		7	7			11.82
16		2	3		21	20	19		39	34	3	2	17.72
3		1			4	16	10		26	23	2	1	30.58
2					2	9	9		18	14	2	2	32.54
		1	1		2	5	5		10	10			14.26
1					1								
3		1	1		5	8	7		15	13		2	25.21
2					2	14	1		15	9	1	5	13.85
220	17	43	34	1	315	397	328		725	587	88	50	17.40

* Died at County Farm, 18; at public institutions, 3.

Table
Births, Marriages, and Deaths for
Cooks

TOWNS.	Population in 1910.	BIRTHS.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Berlin.....	11,780	246	240	..	486	41.25	55	306	78	45	2
Carroll.....	569	3	3	..	6	10.54	5	....	....	1	....
Clarksville.....	271	3	....	..	3	11.07	3	....	....	....	....
Colebrook.....	1,905	20	23	..	43	22.57	31	2	8	1	1
Columbia.....	619	4	9	..	13	21.00	8	1	1	2	1
Dalton.....	475	5	8	..	13	27.36	8	1	1	2	1
Dummer.....	292	2	1	..	3	10.27	1	....	1	....	1
Errol.....	211	1	1	..	2	9.47	2	....	....	....	....
Gorham.....	2,155	27	22	..	49	22.73	12	18	12	6	1
Jefferson.....	1,061	13	16	..	29	27.33	19	4	3	3	....
Lancaster.....	3,054	22	23	..	45	14.73	30	5	3	6	1
Milan.....	924	7	5	..	12	12.98	6	2	1	1	2
Millsfield.....	12	....	....	....	....	....	....	....	....	....	....
Northumberland.....	2,184	31	27	..	58	26.55	33	9	8	4	4
Pittsburg.....	624	4	2	..	6	9.61	4	1	1	....	....
Randolph.....	137	2	1	..	3	21.89	1	....	1	1	....
Shelburne.....	305	1	2	..	3	9.83	1	2	....	....	....
Stark.....	448	7	2	..	9	20.08	4	1	3	1	....
Stewartstown.....	1,128	10	8	..	18	15.95	8	3	3	3	1
Stratford.....	844	9	10	..	19	22.51	12	....	5	1	1
Wentworth Location....	51	....	....	....	....	....	....	....	....	....	....
Whitefield.....	1,635	17	17	..	34	20.79	16	5	7	5	1
Total.....	*30,753	434	420	..	854	27.76	259	360	136	82	17

* Including unincorporated towns and grants.

No. 1.—Continued.

the year ending December 31, 1912.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
31	36	8	20	1	96	96	91	....	*187	110	63	14	15.87
1	.....	.....	.....	.....	1	4	2	....	6	4	2	....	10.54
4	.....	.....	.....	.....	4	1	2	....	3	3	.....	.....	11.07
17	.....	2	2	.....	21	14	14	....	28	22	5	1	14.69
.....	.....	1	.....	.....	1	2	3	....	5	4	1	.....	8.07
4	1	.....	1	.....	6	2	2	....	4	4	.....	.....	8.42
2	.....	.....	.....	.....	2	3	1	....	4	3	1	.....	13.69
3	.....	.....	.....	.....	3	3	.....	....	3	2	.....	1	14.21
17	7	.....	6	.....	30	23	13	....	36	22	12	2	16.70
5	.....	.....	1	.....	6	8	8	....	16	12	4	.....	15.08
12	1	1	3	.....	17	14	19	....	33	26	7	.....	10.80
5	.....	1	.....	.....	6	4	5	....	9	7	1	1	9.74
.....
16	.....	2	2	.....	20	12	18	....	30	21	7	2	13.73
2	.....	.....	.....	.....	2	2	1	....	3	2	.....	1	4.80
3	.....	.....	.....	.....	3	.....	3	....	3	3	.....	.....	21.89
2	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
1	.....	1	2	.....	4	2	3	....	5	5	.....	.....	11.16
3	1	3	3	2	12	13	10	....	†23	15	4	4	15.07
4	.....	.....	1	.....	5	8	7	....	15	10	3	2	17.77
1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
10	.....	3	.....	.....	13	19	12	....	31	19	7	5	18.96
143	46	22	41	3	255	230	214	....	444	294	117	33	14.43

* Died at public institutions, 15.

† Died at County Farm, 6.

Table
Births, Marriages, and Deaths for
Recapitulation

COUNTIES.	Population in 1910.	BIRTHS.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Rockingham.....	52,188	500	471 ..	971	18.60	549	255	72	85	10	
Strafford.....	38,951	404	384 ..	788	20.23	352	269	83	70	14	
Belknap.....	21,309	210	191 ..	401	18.81	234	79	30	51	7	
Carroll.....	16,316	131	119 ..	250	15.32	192	22	12	18	6	
Merrimack.....	53,335	476	465 ..	941	17.64	485	230	102	102	22	
Hillsborough.....	126,072	1,591	1,536 ..	3,127	24.80	830	1605	330	297	65	
Cheshire.....	30,659	326	319 ..	645	21.03	367	171	51	47	9	
Sullivan.....	19,337	195	166 ..	361	18.66	207	81	30	31	12	
Grafton.....	41,652	411	384 ..	795	19.08	503	108	89	73	22	
Coös.....	30,753	434	420 ..	854	27.76	259	360	136	82	17	
Total.....	430,572	4,678	4,455 ..	9,133	21.21	3978	3180	935	856	184	

No. 1.—*Concluded.*

the year ending December 31, 1912.

by Counties.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
342	58	47	39	2	488	477	409	....	886	727	121	38	16.97
232	49	42	57	1	381	310	355	....	665	520	122	23	17.07
101	20	27	13	....	161	210	162	....	372	311	37	24	17.45
123	2	12	8	1	146	143	97	....	240	201	14	25	14.70
269	48	51	40	2	410	467	448	....	915	705	179	31	17.15
585	487	157	198	....	1,427	1,047	1,001	1	2,049	1,461	561	27	16.25
200	30	29	20	....	279	257	242	....	499	375	89	35	16.27
158	38	25	19	2	242	172	180	....	352	293	48	11	18.20
220	17	43	34	1	315	397	328	....	725	587	88	50	17.40
143	46	22	41	3	255	230	214	....	444	294	117	33	14.43
2,373	795	455	464	17	4,104	3,710	3,436	1	7,147	5,474	1,376	297	16.59

Table
Births by Sex and

COUNTIES.		January.	February.	March.	April.	May.
Rockingham	Males	41	49	45	29	56
	Females	42	36	33	50	47
	Not stated					
Strafford	Males	28	43	31	23	33
	Females	36	29	27	36	39
	Not stated					
Belknap	Males	21	15	24	15	23
	Females	15	14	16	12	17
	Not stated					
Carroll	Males	8	9	19	11	10
	Females	8	8	14	9	7
	Not stated					
Merrimack	Males	38	38	37	35	30
	Females	35	38	46	44	41
	Not stated					
Hillsborough	Males	130	125	143	140	133
	Females	115	130	153	118	143
	Not stated					
Cheshire	Males	34	30	37	32	20
	Females	29	19	19	32	23
	Not stated					
Sullivan	Males	13	11	19	9	14
	Females	19	23	10	17	12
	Not stated					
Grafton	Males	35	36	37	37	31
	Females	30	39	32	26	38
	Not stated					
Coös	Males	43	35	29	41	33
	Females	37	35	35	38	31
	Not stated					
Total	Males	391	391	421	372	383
	Females	366	371	385	382	398
	Not stated					
Grand total		757	762	806	754	781

No. 2.

Months, by Counties, 1912.

June.	July.	August.	September	October.	November.	December.	Unknown.	Total.	Grand Total.
36	50	51	41	37	36	29	.....	500	.....
36	38	44	38	34	38	35	.....	471	971
34	31	44	38	43	28	28	.....	404	.....
31	32	41	23	23	32	35	.....	384	788
21	20	13	11	18	15	14	.....	210	.....
19	13	20	23	10	16	16	.....	191	401
13	6	9	16	11	4	15	.....	131	.....
10	12	13	5	13	11	9	.....	119	250
39	46	50	54	40	32	37	.....	476	.....
49	43	44	38	32	31	24	.....	465	941
139	138	153	135	107	131	117	.....	1,591	.....
115	141	126	144	132	117	102	.....	1,536	3,127
27	22	25	23	21	29	26	.....	326	.....
25	27	43	27	20	32	23	.....	319	645
24	19	22	18	10	15	21	.....	195	.....
12	11	14	12	16	10	10	.....	166	361
25	41	43	37	27	29	33	.....	411	.....
29	37	32	33	29	27	32	.....	384	795
32	39	30	37	42	32	41	.....	434	.....
34	33	34	38	33	41	31	.....	420	854
390	412	440	410	356	351	361	.....	4,678	.....
360	387	411	381	342	355	317	.....	4,455	9,133
750	799	851	791	698	706	678	.....	9,133	.....

Table
Births showing age of mother,

NUMBER OF CHILD.	Under 15.			15 to 20.			20 to 25.			25 to 30.			30 to 35.		
	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.
1st.....	4			396	126	5	627	455	3	333	204		110	61	2
2d.....				121	12		511	310	4	316	240	2	153	106	
3d.....				15	4		250	153	1	255	264		134	108	2
4th.....							98	53		185	179		133	157	
5th.....							42	38		110	119		86	119	
6th.....							11	3		73	88		80	100	
7th.....					1		3			38	32	1	64	72	1
8th.....										25	9		26	49	
9th.....										1	5		20	25	
10th.....											2		7	16	
11th.....													7	10	
12th.....													2	6	
13th.....														7	
14th.....															
15th.....															
16th.....															
17th.....															
18th.....															
19th.....															
20th.....															
21st.....															
Not stated				1			6	2		6	9	1	5	7	
Total...	4			533	143	5	1,548	1,014	8	1,342	1,151	4	827	843	5

No. 3.

Number of Child, by Nationality, 1912.

35 to 40.			40 to 45.			45 to 50.			Over 50.			Not stated.			Total.			Grand total.
American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	
43	31	...	15	6	...	...	2	...	...	...	...	8	3	3	1,536	888	13	2,437
66	36	...	11	6	1	...	...	...	...	...	...	14	5	3	1,192	715	10	1,917
84	42	1	11	3	...	1	...	...	...	...	...	7	4	...	757	578	4	1,339
72	53	...	20	10	...	...	...	...	...	...	...	9	2	2	517	454	2	973
71	61	...	13	16	...	...	...	...	...	...	...	2	2	1	325	355	1	681
56	67	...	15	15	...	1	4	...	...	...	...	2	1	...	238	278	...	516
56	71	...	15	21	...	2	1	...	...	...	...	1	...	...	178	198	2	378
41	63	1	19	23	...	1	...	...	...	...	...	...	3	...	112	147	1	260
19	52	...	10	17	...	1	2	...	...	...	...	1	2	...	52	103	...	155
21	52	1	14	20	...	1	...	...	...	...	...	...	...	...	43	90	1	134
11	36	...	2	22	...	1	3	...	...	...	...	...	...	...	21	71	...	92
8	32	...	2	21	...	...	4	...	...	...	...	...	1	...	12	64	...	76
9	15	...	2	10	1	...	4	...	...	...	...	...	1	...	11	37	1	49
2	8	...	4	5	...	...	1	...	...	...	...	...	1	...	6	15	...	21
...	3	...	2	6	...	...	...	...	...	...	...	...	1	...	2	10	...	12
...	2	...	2	8	...	...	3	...	...	...	...	...	...	...	2	13	...	15
...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	3	...	3
...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	3	...	3
...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1
1	5	...	1	2	...	...	...	...	...	...	...	11	10	3	31	35	3	69
561	629	3	158	219	2	8	24	...	...	...	...	55	36	12	5,036	4,059	38	9,133

Table No. 4.—1912.

AGES OF GROOMS.	AGES OF BRIDES.														No. of grooms.
	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	Over 80. Not stated.	
Under 20.....	*161	59	2	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	225
20 to 25.....	†604	803	143	32	7	1	.....	.....	.....	.....	.....	.....	.....	.....	1,590
25 to 30.....	‡189	476	256	53	18	1	1	.....	.....	.....	.....	.....	.....	.....	994
30 to 35.....	32	142	139	87	35	13	2	1	.....	.....	.....	.....	.....	.....	451
35 to 40.....	16	56	67	81	34	19	11	3	1	.....	.....	.....	.....	1	289
40 to 45.....	5	26	21	42	38	29	7	3	1	.....	.....	.....	.....	.....	172
45 to 50.....	4	7	17	16	27	17	31	9	4	1	.....	.....	.....	.....	133
50 to 55.....	.....	3	5	6	15	16	16	10	5	4	1	.....	.....	.....	81
55 to 60.....	1	1	3	4	8	11	11	8	3	4	2	1	.....	1	58
60 to 65.....	1	2	1	2	5	3	6	8	8	11	2	3	.....	.....	52
65 to 70.....	.....	.....	1	1	3	4	3	7	4	5	3	.....	.....	.....	31
70 to 75.....	.....	.....	.....	.....	1	3	2	2	1	3	2	1	.....	.....	15
75 to 80.....	.....	.....	.....	.....	.....	2	.....	3	.....	2	.....	.....	.....	.....	7
80 to 85.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	2
Not stated.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	4
No. of brides.....	1,013	1,578	655	326	192	119	91	51	30	29	12	4	1	3	4,104

* One, fourteen years of age; eight fifteen.

† One, thirteen years of age; two fourteen years of age; seven fifteen.

‡ Two fifteen years of age.

Table No. 5.
Still Births, by Sex, Parentage, and Months, by Counties, 1912.

COUNTIES.	SEX.		PARENTAGE.							MONTHS.												
	Male.	Female.	Not stated.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Not stated.
Rockingham.....	30	23	4	31	18	3	3	2	57	3	5	3	4	6	1	6	6	7	6	5	5	...
Strafford.....	17	12	...	5	15	3	3	1	29	4	2	1	4	2	3	2	1	2	...	6	2	...
Belknap.....	15	9	...	9	8	5	1	1	24	...	...	...	...	2	2	6	1	2	1	6	2	...
Carroll.....	9	5	1	11	1	1	1	1	15	1	2	2	2	1	4	...	1	1	1	2	3	...
Merrimack.....	19	22	...	23	11	2	5	...	41	3	2	2	2	3	6	4	4	4	1	5	...	...
Hillsborough.....	108	54	6	44	85	17	14	8	168	11	11	17	16	24	15	9	12	13	9	14	17	...
Cheshire.....	25	10	...	21	6	4	3	1	35	3	4	...	2	3	2	5	3	5	5	1	2	...
Sullivan.....	8	10	...	12	5	1	...	...	18	6	1	1	2	...	1	2	...	1	3	1	1	...
Grafton.....	16	20	...	25	4	3	2	2	36	2	3	2	2	1	3	1	6	5	6	4	1	...
Coös.....	19	14	...	11	9	5	5	3	33	1	3	...	6	4	3	1	7	2	3	1	2	...
Total.....	266	179	11	192	162	46	37	19	456	34	33	31	42	46	40	36	41	41	35	40	37	...

BIRTHS.

DIVORCES.

Table No. 6.

Divorces Decreed by the Supreme Court of New Hampshire, in the year 1912, as returned by the Clerks of the Several Counties.

COUNTIES.	CAUSES OF DIVORCE.														LIBELLANTS.									
	Desertion.	Legal separation, cause not stated.	Conviction of crime and imprisonment.	Abandonment.	Abandonment and adultery.	Habitual drunkenness, extreme cruelty and treatment injurious to health.	Adultery.	Abandonment and extreme cruelty.	Extreme cruelty.	Extreme cruelty and treatment injurious to health.	Extreme cruelty and habitual drunkenness.	Extreme cruelty and adultery.	Treatment injurious to health and adultery.	Habitual drunkenness.	Impotency.	Willing absence and refusal to cohabit.	Nullity.	Treatment injurious to health and to reason.	Willing absence three years.	Willing absence and abandonment.	Males.	Females.	Total of each county.	
Rockingham.....				32			12		15					5		13	6	4		2		23	53	76
Strafford.....							10		12					4			4			4		10	31	41
Belknap.....							8		7					2		8	2	1		1		11	23	34
Carroll.....							3		10		1			6					3		6	23	29	
Merrimack.....				23			14		15					2			3		7		29	50	79	
Hillsborough.....		1	2	65	1	1	22		63	4	4	1	1	16			4		10	4	49	151	200	
Cheshire.....			2	14			6		10					3			1	2			16	27	43	
Sullivan.....		1		5			6		6					3		3	1		1		3	23	26	
Grafton.....				32			15		26	1	1			4		1	2				26	63	89	
Cochs.....	2			5			5		8					3			1				8	16	24	
Total.....	2	2	4	176	1	1	101	1	172	5	6	1	1	48	1	33	39	11	3	29	4	181	460	641

CAUSES OF DEATH.

INTERNATIONAL CLASSIFICATION.

In the following tables the causes of death are arranged according to the International Classification of the Causes of Death.

The International Classification has been adopted by all the Americas and a greater part of Europe. The United States Bureau of the Census uses it in its statistical compilation of the causes of death, and it has been accepted by practically all of the registration states of the country.

Table

Causes of Death arranged by Towns and

TOWNS IN ROCKINGHAM COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicæmia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.					
Atkinson.....				
Auburn.....	1	.	.	.				
Brentwood.....	1	6	.	.	1				
Candia.....	1	.	.	.				
Chester.....				
Danville.....				
Deerfield.....	1	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Derry.....	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	7	.	.	.				
East Kingston.....				
Epping.....	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.				
Exeter.....	2	2	.	4	.	.	1	.	.	.	.	.	.	.	.	.	10	.	.	.				
Fremont.....	3	.	.	.				
Greenland.....	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.				
Hampstead.....	1	.	.	.	.	.	.	.	.	.
Hampton.....				
Hampton Falls.....				
Kensington.....	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Kingston.....	1	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.				
Londonderry.....	2	.	.	.				
Newcastle.....	1	.	.	.				
Newfields.....				
Newington.....				
Newmarket.....	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6	.	.	.				
Newton.....	1	.				
North Hampton.....				
Northwood.....	1	.	.	.				
Nottingham.....	1	.	.	.				
Plaistow.....				
Portsmouth.....	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10	1	1	.
Raymond.....	1	.	.	.				
Rye.....	1	.	.	.				
Salem.....	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.				
Sandown.....				
Seabrook.....	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.
South Hampton.....	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Stratham.....				
Windham.....				
Total.....	2	.	.	1	.	9	3	1	9	.	.	1	.	.	.	2	.	.	.	.	1	57	3	3	.

No. 7.

Counties, 1912.—International Classification.

I. GENERAL DISEASES.—Continued.

[illegible]

Table

Causes of Death arranged by Towns and

TOWNS IN ROCKINGHAM COUNTY.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																	
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.	75. Diseases of the eye.	76. Diseases of the ear.
Atkinson.....						2												
Auburn.....																		
Brentwood.....					1	3						1						
Candia.....	1						1	3										
Chester.....						2												
Danville.....						1												
Deerfield.....	1					3		1										
Derry.....					2	9	1	1								1		
East Kingston.....						1								2				
Epping.....						5										1		
Exeter.....	1				2	7		1			1			1				
Fremont.....						1												
Greenland.....						1												
Hampstead.....						4												
Hampton.....						3		1										
Hampton Falls.....						1												
Kensington.....				1		2												
Kingston.....						1		1										
Londonderry.....						3												
Newcastle.....						1								1				
Newfields.....								2										
Newington.....						2			1									
Newmarket.....	1	1				2		1				1				1		
Newton.....						2												
North Hampton.....																		
Northwood.....						1		2										
Nottingham.....						1												
Plaistow.....		1				3												
Portsmouth.....				1	1	15	1	4			1		2					
Raymond.....						2												
Rye.....						2												
Salem.....						2	1	2										1
Sandown.....						2												
Seabrook.....						1							1					
South Hampton.....																		
Stratham.....								1										
Windham.....																		
Total.....	3	3		2	6	85	4	20	1		3	1	7			3		1

No. 7.—Continued.

Counties, 1912.—International Classification.

III. DISEASES OF THE CIRCULATORY SYSTEM.												IV. DISEASES OF THE RESPIRATORY SYSTEM.											
77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries.	82. Embolism and thrombosis.	83. Diseases of the veins.	84. Diseases of the lymphatic system.	85. Hemorrhages.	86. Other diseases of the circulatory system.	87. Laryngitis.	88. Other diseases of the larynx.	89. Diseases of the thyroid body.	90. Acute bronchitis.	91. Chronic bronchitis.	92. Broncho-pneumonia.	93. Pneumonia.	94. Pleurisy.	95. Congestion and apoplexy of the lungs.	96. Gangrene of the lungs.	97. Asthma.	98. Pulmonary emphysema.	99. Other diseases of the respiratory system.	
...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	6	...	1	1	...	...	...	...	...	...	...	...	2	...	3	...	1	...	...	...	...
...	...	1	...	1	1	...	...	...	...	1	...	...	...	1	...	1	...	...	...	...	...	...
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
...	...	5	1	...	...	...	...	...	...	...	...	...	...	...	1	6	1	1	...	...	...	...
...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	6	...	3	1	2	1	...	1	
...	1	4	1	1	1	...	13	1	
...	3	...	1	1	1	
...	...	2	1	1	
...	...	3	...	1	1	7	...	1	
...	
...	...	1	1	
...	...	1	1	1	...	2	...	1	
...	...	7	1	1	1	2	
...	...	2	...	1	2	1	
...	...	3	1	
...	...	2	...	2	1	
...	...	5	2	
...	...	1	1	1	1	1	
...	3	
...	...	1	1	1	1	1	
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Table
Causes of Death arranged by Towns and

TOWNS IN ROCKINGHAM COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.												
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhoea and enteritis (under 2 years).	106. Diarrhoea and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.
Atkinson.....													
Auburn.....													
Brentwood.....													
Candia.....												1	
Chester.....													
Danville.....									1				
Deerfield.....		1											
Derry.....					1	3	1		1				
East Kingston.....													
Epping.....					1								
Exeter.....						1				1			
Fremont.....													
Greenland.....													
Hampstead.....													
Hampton.....					1	1						1	
Hampton Falls.....													
Kensington.....													1
Kingston.....					1								
Londonderry.....						1	1						
Newcastle.....												1	
Newfields.....													1
Newington.....													
Newmarket.....					5	5							1
Newton.....													1
North Hampton.....													
Northwood.....									1				1
Nottingham.....													
Plaistow.....							1						
Portsmouth.....					2	4	2			2			1
Raymond.....									1				1
Rye.....						1							
Salem.....					2								
Sandown.....													
Seabrook.....					1	1			1			1	
South Hampton.....													
Stratham.....													
Windham.....													
Total.....			1	14	17	5		5	3	4	1	8	3

Table

Causes of Death arranged by Towns and

TOWNS IN ROCKINGHAM COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.	150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Atkinson.....												
Auburn.....											1	
Brentwood.....												
Candia.....												
Chester.....												
Danville.....										1		
Deerfield.....	1									1		
Derry.....	1									1		
East Kingston.....												
Epping.....										1		
Exeter.....					1				1	3		
Fremont.....												
Greenland.....												
Hampstead.....										2		
Hampton.....												
Hampton Falls.....									2			
Kensington.....												
Kingston.....	1									1		
Londonderry.....										1		
Newcastle.....												
Newfields.....											1	
Newington.....												
Newmarket.....					1							
Newton.....												
North Hampton.....											1	
Northwood.....									1	1		
Nottingham.....												
Plaistow.....										2		
Portsmouth.....					1				3	7	3	
Raymond.....										2		
Rye.....												
Salem.....										1		
Sandown.....												
Seabrook.....									1			
South Hampton.....												
Stratham.....												
Windham.....												
Total.....	3				3				8	24	6	

No. 7.—Continued.

Counties, 1912.—International Classification.

XII. OLD AGE.		XIII. EXTERNAL CAUSES.																							XIV. ILL-DEFINED DISEASES.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
154. Senile debility.		155. Suicide by poison.		156. Suicide by asphyxia.		157. Suicide by hanging or strangulation.		158. Suicide by drowning.		159. Suicide by firearms.		160. Suicide by cutting instruments.		161. Suicide by jumping from high places.		162. Suicide by crushing.		163. Other suicides.		164. Fractures.		165. Dislocations.		166. Other accidental traumatisms.		167. Burns and scalds.		168. Burns from corrosive substances.		169. Sunstroke.		170. Freezing.		171. Electric shock.		172. Accidental drowning.		173. Inanition (starvation).		174. Absorption of deleterious gases (non-suicidal).		175. Other acute poisonings.		176. Other external violence.		177. Dropsy.		178. Sudden death.		179. Causes of death unspecified or ill-defined.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
3	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Table
Causes of Death arranged by Towns and

TOWNS IN STRAFFORD COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicemia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.					
Barrington.....						1																1							
Dover.....						1	4	1	1			2				2						13	2						
Durham.....																													
Farmington.....																						2		1					
Lee.....									1													1							
Madbury.....																													
Middleton.....	1																												
Milton.....						1		1																					
New Durham.....																						2							
Rochester.....	1					9		2													1	12							
Rollinsford.....						1																							
Somersworth.....	5					2	1					2		1								8							
Strafford.....																						1							
Total.....	7					5	15	1	5			4		1		2					1	40	2	1					

Table

Causes of Death arranged by Towns and

TOWNS IN STRAFFORD COUNTY.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.															
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.
Barrington.....						3										1
Dover.....	2			2	12	8		2								2
Durham.....						1		1								
Farmington.....					6											1
Lee.....					2	1										
Madbury.....					1											
Middleton.....																
Milton.....	1				1											
New Durham.....					1	1					1					
Rochester.....	1		1	10	3	1						2				
Rollinsford.....			1	3	1											
Somersworth.....	3			1	14											1
Strafford.....	2			2	2											
Total.....	9		2	3	55	17		1	3	1	2					5

No. 7.—Continued.

Counties, 1912.—International Classification.

III. DISEASES OF THE CIRCULATORY SYSTEM.										IV. DISEASES OF THE RESPIRATORY SYSTEM.													
77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries.	82. Embolism and thrombosis.	83. Diseases of the veins.	84. Diseases of the lymphatic system.	85. Hemorrhages.	86. Other diseases of the circulatory system.	87. Laryngitis.	88. Other diseases of the larynx.	89. Diseases of the thyroid body.	90. Acute bronchitis.	91. Chronic bronchitis.	92. Broncho-pneumonia.	93. Pneumonia.	94. Pleurisy.	95. Congestion and apoplexy of the lungs.	96. Gangrene of the lungs.	97. Asthma.	98. Pulmonary emphysema.	99. Other diseases of the respiratory system.	
.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
.....	1	34	2	2	3	.....	1	.....	1	.....	1	1	1	1	7	15	1	3	1	.....	.....	.....
.....	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....
.....	.....	3	2	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	4	.....	.....	.....	1	.....	.....
.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....	.....	1	.....	.....
.....	1	9	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	2	4	6	.....	2	.....	.....	.....	.....
.....	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
.....	3	6	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	2	2	.....	.....	.....	.....	.....	.....
.....	.....	2	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
.....	6	66	7	7	3	.....	1	.....	1	2	.....	1	3	4	17	34	1	5	1	2	.....	.....

Table

Causes of Death arranged by Towns and

TOWNS IN STRAFFORD COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.																			
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhoea and enteritis (under 2 years).	106. Diarrhoea and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.	118. Appendicitis.	
Barrington.....					1															
Dover.....			2	4	7	2			2	1			2				2		1	
Durham.....																	1			
Farmington.....					1								2							
Lee.....																				
Madbury.....																				
Middleton.....																				
Milton.....					2					1										
New Durham.....																				
Rochester.....					2	5	2		1				1				2			
Rollinsford.....							1			1	1									
Somersworth.....					4	3											2			
Strafford.....					2															
Total.....			2	16	15	5			3	3	1		5				7		1	

No. 7.—Continued.

Counties, 1912.—International Classification.

VI. DISEASES OF THE GENITO-URINARY SYSTEM AND ITS ADNEXA.													VII. THE PUERPERAL STATE.									
119. Acute nephritis.	120. Bright's disease.	121. Other diseases of the kidneys.	122. Calculi of the urinary tract.	123. Diseases of the bladder.	124. Diseases of the urethra.	125. Diseases of the prostate.	126. Non-venereal diseases of the male genital organs.	127. Metritis.	128. Uterine hemorrhage (non-puerperal).	129. Uterine tumor.	130. Other diseases of the uterus.	131. Cysts and other tumors of the ovary.	132. Other diseases of the female genital organs.	133. Non-puerperal diseases of the breast.	134. Accidents of pregnancy.	135. Puerperal hemorrhage.	136. Other accidents of labor.	137. Puerperal septicemia.	138. Puerperal albuminuria and convulsions.	139. Phlegmasia alba dolens (puerperal).	140. Other puerperal accidents.	141. Puerperal diseases of the breast.
...	1																					
3	16												2		1		2					
...																						
...	5																	1				
...	1																					
...																						
2	4																					
...	1																					
...	12		2							1								1	1			
...	2																					
2	11						1			1												
...	3		1																			
7	56		3				1			2			2		1		4	1				

Table

Causes of Death arranged by Towns and

TOWNS IN STRAFFORD COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.	150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Barrington.....									1			
Dover.....									2	14	3	
Durham.....												
Farmington.....										3	1	
Lee.....												
Madbury.....												
Middleton.....												
Milton.....										1		
New Durham.....												
Rochester.....	2								2	3	2	
Rollinsford.....										1	2	
Somersworth.....					1	1				5	4	
Strafford.....												
Total.....	2				1	1			5	27	12	

Table

Causes of Death arranged by Towns and

TOWNS IN BELKNAP COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicemia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.					
Alton.....									3																				
Barnstead.....																													
Belmont.....																													
Center Harbor.....																													
Gilford.....																													
Gilmanton.....																													
Laconia.....							2	1														7	1						
Meredith.....									1																				
New Hampton.....									1													1							
Sanbornton.....																													
Tilton.....							1		1													3							
Total.....							3	1	6													11	1						

Table

Causes of Death arranged by Towns and

TOWNS IN BELKNAP COUNTY.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																		
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.	75. Diseases of the eye.	76. Diseases of the ear.	
Alton.....	1			2	3	1													
Barustead.....					1														
Belmont.....					1														
Center Harbor.....					1														
Gilford.....					1														
Gilmanton.....					1								1						
Laconia.....	3		1	1	16	13		2	2			2							
Meredith.....					2														
New Hampton.....					2	1													
Sanbornton.....					1														
Tilton.....				1	4	2										1			
Total.....	4		1	4	33	17		2	2			2	1			1			

No. 7.—Continued.

Counties, 1912.—International Classification.

III. DISEASES OF THE CIRCULATORY SYSTEM.										IV. DISEASES OF THE RESPIRATORY SYSTEM.												
77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries.	82. Embolism and thrombosis.	83. Diseases of the veins.	84. Diseases of the lymphatic system.	85. Hemorrhages.	86. Other diseases of the circulatory system.	87. Laryngitis.	88. Other diseases of the larynx.	89. Diseases of the thyroid body.	90. Acute bronchitis.	91. Chronic bronchitis.	92. Broncho-pneumonia.	93. Pneumonia.	94. Pleurisy.	95. Congestion and apoplexy of the lungs.	96. Gangrene of the lungs.	97. Asthma.	98. Pulmonary emphysema.	99. Other diseases of the respiratory system.
.....	.....	5	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....	.....	.....	.....	.....	.....
.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....
.....	.....	4	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....
.....	1	20	2	3	1	.....	.....	.....	.....	.....	.....	.....	.....	1	3	9	.....	3	.....	.....	.....	.....
.....	.....	3	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	4	.....	.....	.....	.....	.....	.....	.....
.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	4	.....	1	.....	.....	.....	.....	.....
.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	2	2	.....	4	1	.....	.....	.....	.....	.....	.....	.....	.....	1	4	.....	.....	.....	.....	.....	.....	.....
.....	3	41	5	9	2	1	.....	.....	.....	.....	.....	.....	5	3	6	25	.....	4	.....	.....	.....	.....

Table

Causes of Death arranged by Towns and

TOWNS IN BELKNAP COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.																		
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhoea and enteritis (under 2 years).	106. Diarrhoea and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.	118. Appendicitis.
Alton.....					1				1										
Barnstead.....												1							
Belmont.....						1													1
Center Harbor.....																			
Gilford.....					1							1							
Gilmanton.....					1	1													
Laconia.....					8	4	3			1					1		3		
Meredith.....					1									1					
New Hampton.....					1							1							
Sanbornton.....							1												
Tilton.....					1														
Total.....					14	6	4		1	1		3	1	1		3			1

No. 7.—Continued.

Counties, 1912.—International Classification.

VI. DISEASES OF THE GENITO-URINARY SYSTEM AND ITS ADNEXA.										VII. THE PUERPERAL STATE.									
119. Acute nephritis.																			
120. Bright's disease.																			
121. Other diseases of the kidneys.																			
122. Calculi of the urinary tract.																			
123. Diseases of the bladder.																			
124. Diseases of the urethra.																			
125. Diseases of the prostate.																			
126. Non-venereal diseases of the male genital organs.																			
127. Metritis.																			
128. Uterine hemorrhage (non-puerperal).																			
129. Uterine tumor.																			
130. Other diseases of the uterus.																			
131. Cysts and other tumors of the ovary.																			
132. Other diseases of the female genital organs.																			
133. Non-puerperal diseases of the breast.																			
134. Accidents of pregnancy.																			
135. Puerperal hemorrhage.																			
136. Other accidents of labor.																			
137. Puerperal septicemia.																			
138. Puerperal albuminuria and convulsions.																			
139. Phlegmasia alba dolens (puerperal).																			
140. Other puerperal accidents.																			
141. Puerperal diseases of the breast.																			
..	1																		
..																			
..	1																		
..																			
..	1	1																	
..	1											1							
4	13	1									1								
..	2																		
..	2																		
..	1																		
..	3																		
4	25	2									1	1							

Table

Causes of Death arranged by Towns and

TOWNS IN BELKNAP COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.	150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Alton.....												
Barnstead.....										2		
Belmont.....										1		
Center Harbor.....												
Gilford.....										1		
Gilmanton.....	1											
Laconia.....	3								1	9	4	
Meredith.....												
New Hampton.....												
Sanbornton.....												
Tilton.....										2		
Total.....	4								1	15	4	

No. 7.—Continued.

Counties, 1912.—International Classification.

XII. OLD AGE.		XIII. EXTERNAL CAUSES.																				XIV. ILL-DEFINED DISEASES.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
154. Senile debility.		155. Suicide by poison.																				156. Suicide by asphyxia.		157. Suicide by hanging or strangulation.		158. Suicide by drowning.		159. Suicide by firearms.		160. Suicide by cutting instruments.		161. Suicide by jumping from high places.		162. Suicide by crushing.		163. Other suicides.		164. Fractures.		165. Dislocations.		166. Other accidental traumas.		167. Burns and scalds.		168. Burns from corrosive substances.		169. Sunstroke.		170. Freezing.		171. Electric shock.		172. Accidental drowning.		173. Inanition (starvation).		174. Absorption of deleterious gases (non-suicidal).		175. Other acute poisonings.		176. Other external violence.		177. Dropsy.		178. Sudden death.		179. Causes of death unspecified or ill-defined.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
.....	

Table
Causes of Death arranged by Towns and

TOWNS IN CARROLL COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicemia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.					
Albany.....																													
Bartlett.....																													
Brookfield.....																													
Chatham.....																													
Conway.....					1				1														1						
Eaton.....																													
Effingham.....	1																												
Freedom.....									1																				
Hart's Location.....																													
Jackson.....																													
Madison.....																													
Moultonborough.....																						1							
Ossipee.....																						1							
Sandwich.....																						1							
Tamworth.....																													
Tuftonborough.....																							1						
Wakefield.....													1																
Wolfeboro.....							1	2								1						2							
Total.....	1				1		1		4					1		1						6	1						

Table

Causes of Death arranged by Towns and

TOWNS IN CARROLL COUNTY.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																	
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.	75. Diseases of the eye.	76. Diseases of the ear.
Albany.....																		
Bartlett.....						1												
Brookfield.....						1												
Chatham.....																		
Conway.....								1					1					
Eaton.....					1													
Effingham.....					1	1		1										
Freedom.....																		
Hart's Location.....																		
Jackson.....																		
Madison.....						1												
Moultonborough.....						1												
Ossipee.....						3												
Sandwich.....		1				2												
Tamworth.....						1												
Tuftonborough.....						1												
Wakefield.....						1		1										
Wolfeboro.....											1							
Total.....	1				2	13		3			1		1					

No. 7.—Continued.

Counties, 1912.—International Classification.

III. DISEASES OF THE CIRCULATORY SYSTEM.										IV. DISEASES OF THE RESPIRATORY SYSTEM.												
77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries.	82. Embolism and thrombosis.	83. Diseases of the veins.	84. Diseases of the lymphatic system.	85. Hemorrhages.	86. Other diseases of the circulatory system.	87. Laryngitis.	88. Other diseases of the larynx.	89. Diseases of the thyroid body.	90. Acute bronchitis.	91. Chronic bronchitis.	92. Broncho-pneumonia.	93. Pneumonia.	94. Pleurisy.	95. Congestion and apoplexy of the lungs.	96. Gangrene of the lungs.	97. Asthma.	98. Pulmonary emphysema.	99. Other diseases of the respiratory system.
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.....	2	1	3	1
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.....	1
.....	1
.....	1	1
.....	2	1
.....	6	2	1	1	1	3
.....	3	1	1
1	4	2
.....	1	1	1	2
.....	1	2	1	2	1
.....	5	2	1	1	1	1
1	30	5	10	3	1	2	4	23	2	3	1

Table
Causes of Death arranged by Towns and

TOWNS IN CARROLL COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.																		
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhoea and enteritis (under 2 years).	106. Diarrhoea and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.	118. Appendicitis.
Albany.....																			
Bartlett.....						1									1				
Brookfield.....					1														
Chatham.....																			
Conway.....																			
Eaton.....																			
Effingham.....																			
Freedom.....					1					1									
Hart's Location.....																			
Jackson.....																			
Madison.....					1														
Moultonborough.....					2														
Ossipee.....					2	1	2												
Sandwich.....					1														
Tamworth.....					1												2		
Tuftonborough.....																			
Wakefield.....					1														
Wolfeboro.....									1										
Total.....					10	2	2		1	1					1		2		

Table

Causes of Death arranged by Towns and

TOWNS IN CARROLL COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.	150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Albany.....												
Bartlett.....										1		
Brookfield.....									1			
Chatham.....												
Conway.....										3		
Eaton.....												
Effingham.....												
Freedom.....										1		
Hart's Location.....												
Jackson.....												
Madison.....											1	
Moultonborough.....												
Ossipee.....										2		
Sandwich.....										1		
Tamworth.....												
Tuftonborough.....												
Wakefield.....												
Welleboro.....										1		
Total.....									1	9	1	

No. 7.—Continued.

Counties, 1912.—International Classification.

XII. Old Age.		XIII. EXTERNAL CAUSES.										XIV. ILL-DEFINED DISEASES.														
154. Senile debility.		155. Suicide by poison.	156. Suicide by asphyxia.	157. Suicide by hanging or strangulation.	158. Suicide by drowning.	159. Suicide by firearms.	160. Suicide by cutting instruments.	161. Suicide by jumping from high places.	162. Suicide by crushing.	163. Other suicides.	164. Fractures.	165. Dislocations.	166. Other accidental traumatism.	167. Burns and scalds.	168. Burns from corrosive substances.	169. Sunstroke.	170. Freezing.	171. Electric shock.	172. Accidental drowning.	173. Inanition (starvation).	174. Absorption of deleterious gases (non-suicidal).	175. Other acute poisonings.	176. Other external violence.	177. Dropsy.	178. Sudden death.	179. Causes of death unspecified or ill-defined.
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Table

Causes of Death arranged by Towns and

TOWNS IN MERRIMACK COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicæmia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabbits.	24. Actinomycosis, trichinosis, etc.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.					
Allentown.....			1																										
Andover.....																													
Boscawen.....												1				1					1								
Bow.....																													
Bradford.....																						1							
Canterbury.....																													
Chichester.....																													
Concord.....	5			3		1	1		1			2		3		4						15		2					
Danbury.....																					1								
Dunbarton.....																													
Epsom.....																						1							
Franklin.....			1											2								3							
Henniker.....																						1							
Hill.....																1													
Hooksett.....																						1	1						
Hopkinton.....																						3							
Loudon.....																													
Newbury.....																													
New London.....																						2							
Northfield.....							1		1																				
Pembroke.....																						17							
Pittsfield.....																1						1							
Salisbury.....																													
Sutton.....																						1							
Warner.....																													
Webster.....																						1							
Wilmot.....																						1		1					
Total.....	5	2	3			1	2		2			3		5		7					1	49	1	3					

Table

Causes of Death arranged by Towns and

TOWNS IN MERRIMACK COUNTY.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																	
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.	75. Diseases of the eye.	76. Diseases of the ear.
Allenstown.....	1					2												
Andover.....						3												
Boscawen.....						8		1										
Bow.....						1												
Bradford.....						1												
Canterbury.....				1		2												
Chichester.....						2												
Concord.....	1				3	42		4	13	12	4	1	2			13		
Danbury.....						3												
Dunbarton.....						1												
Epsom.....				1		3		1										
Franklin.....						12		3								1		
Henniker.....				1		1										1		
Hill.....						1												
Hooksett.....						3		1										
Hopkinton.....						4												
Loudon.....						2												
Newbury.....																		
New London.....						1												
Northfield.....						2										1		
Pembroke.....		2				3	1											
Pittsfield.....					1	6		1		1								
Salisbury.....						1		1					1					
Sutton.....						1		2										
Warner.....		1				4												
Webster.....																		
Wilmot.....						1												
Total.....	1	4		1	6	109	1	14	13	13	4	1	3			16		

No. 7.—Continued.

Counties, 1912.—International Classification.

III. DISEASES OF THE CIRCULATORY SYSTEM.										IV. DISEASES OF THE RESPIRATORY SYSTEM.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
77. Pericarditis.										78. Acute endocarditis.										79. Organic diseases of the heart.										80. Angina pectoris.										81. Diseases of the arteries.										82. Embolism and thrombosis.										83. Diseases of the veins.										84. Diseases of the lymphatic system.										85. Hemorrhages.										86. Other diseases of the circulatory system.										87. Laryngitis.										88. Other diseases of the larynx.										89. Diseases of the thyroid body.										90. Acute bronchitis.										91. Chronic bronchitis.										92. Broncho-pneumonia.										93. Pneumonia.										94. Pleurisy.										95. Congestion and apoplexy of the lungs.										96. Gangrene of the lungs.										97. Asthma.										98. Pulmonary emphysema.										99. Other diseases of the respiratory system.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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Table

Causes of Death arranged by Towns and

TOWNS IN MERRIMACK COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.																		
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhœa and enteritis (under 2 years).	106. Diarrhœa and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.	118. Appendicitis.
Allenstown.....							1												
Andover.....					2		1												
Boscawen.....					2				1										
Bow.....					1														
Bradford.....													1						
Canterbury.....																			
Chichester.....																			
Concord.....					4	8	15		1								5		1
Danbury.....					1														
Dunbarton.....																			
Epsom.....																			
Franklin.....									1				3	1	1				1
Henniker.....									1				1						
Hill.....													1						
Hooksett.....						2													
Hopkinton.....																			
Loudon.....																			
Newbury.....									1										
New London.....													1						
Northfield.....					1														
Pembroke.....					1	1							1						
Pittsfield.....				1	1	1							1						
Salisbury.....																			1
Sutton.....																			
Warner.....																1			
Webster.....					1														
Wilmot.....					1										1				
Total.....	1	15	12	17					5				9	1	4		5		3

No. 7.—Continued.

Counties, 1912.—International Classification.

VI. DISEASES OF THE GENITO-URINARY SYSTEM AND ITS ADNEXA.													VII. THE PUERPERAL STATE.										
119. Acute nephritis.																							
120. Bright's disease.		1	1	1	33	3	1	1	1	1	1	1											
121. Other diseases of the kidneys.																							
122. Calculi of the urinary tract.																							
123. Diseases of the bladder.						1																	
124. Diseases of the urethra.							1																
125. Diseases of the prostate.					1																		
126. Non-venereal diseases of the male genital organs.																							
127. Metritis.																							
128. Uterine hemorrhage (non-puerperal).																							
129. Uterine tumor.					1																		
130. Other diseases of the uterus.																							
131. Cysts and other tumors of the ovary.			1																				
132. Other diseases of the female genital organs.																							
133. Non-puerperal diseases of the breast.																							
134. Accidents of pregnancy.																							
135. Puerperal hemorrhage.				1																			
136. Other accidents of labor.																							
137. Puerperal septicemia.																							
138. Puerperal albuminuria and convulsions.						1																	
139. Phlegmasia alba dolens (puerperal).																							
140. Other puerperal accidents.																							
141. Puerperal diseases of the breast.																							
	2	50	2	2	2					1		1			2	1							

Table

Causes of Death arranged by Towns and

TOWNS IN MERRIMACK COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.		150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Allentown.....									1	3	1	
Andover.....									1			
Boscawen.....												
Bow.....												
Bradford.....												
Canterbury.....												
Chichester.....	1											
Concord.....	1								2	17		
Danbury.....												
Dunbarton.....												
Epsom.....										1		
Franklin.....										4		
Henniker.....										2		
Hill.....												
Hooksett.....									2	3		
Hopkinton.....	1									2		
Loudon.....												
Newbury.....									2			
New London.....										1	1	
Northfield.....										1		
Pembroke.....									1	1		
Pittsfield.....										1		
Salisbury.....												
Sutton.....											1	
Warner.....												
Webster.....	1											
Wilmot.....												
Total.....	4								9	36	3	....

No. 7.—Continued.

Counties, 1912.—International Classification.

XII. OLD AGE.		XIII. EXTERNAL CAUSES.																							XIV. ILL-DEFINED DISEASES.		
154. Senile debility.		155. Suicide by poison.	156. Suicide by asphyxia.	157. Suicide by hanging or strangulation.	158. Suicide by drowning.	159. Suicide by firearms.	160. Suicide by cutting instruments.	161. Suicide by jumping from high places.	162. Suicide by crushing.	163. Other suicides.	164. Fractures.	165. Dislocations.	166. Other accidental traumatisms.	167. Burns and scalds.	168. Burns from corrosive substances.	169. Sunstroke.	170. Freezing.	171. Electric shock.	172. Accidental drowning.	173. Inanition (starvation).	174. Absorption of deleterious gases (non-suicidal).	175. Other acute poisonings.	176. Other external violence.	177. Dropsy.	178. Sudden death.	179. Causes of death unspecified or ill-defined.	
1	2												1														1

Table

Causes of Death arranged by Towns and

TOWNS IN HILLSBOROUGH COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicemia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.					
Amherst.....																													
Antrim.....																													
Bedford.....							1															1							
Bennington.....	1						1															2							
Brookline.....																													
Deering.....																													
Francestown.....																													
Goffstown.....								1														19		1					
Greenfield.....																						1							
Greenville.....																						2							
Hancock.....																													
Hillsborough.....																2						1							
Hollis.....																						1							
Hudson.....																1						3							
Litchfield.....																													
Lyndeborough.....																													
Manchester.....	7	1		2		1	10	6				1		1		3					3	55	16	3					
Mason.....																						1							
Merrimack.....																													
Milford.....					1	1	1															6							
Mont Vernon.....																						2							
Nashua.....	2				1	4	2		5			1	1	1	5							15	3	1					
New Boston.....																													
New Ipswich.....																													
Pelham.....																													
Peterborough.....																						1							
Sharon.....																													
Temple.....																						1	1						
Weare.....																													
Wilton.....					1																	2							
Windsor.....																													
Total.....	10	1		2	3	6	15	7	5			2		2	11					3	114	20	5						

No. 7.—Continued.

Counties, 1912.—International Classification.

III. DISEASES OF THE CIRCULATORY SYSTEM.										IV. DISEASES OF THE RESPIRATORY SYSTEM.												
77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries.	82. Embolism and thrombosis.	83. Diseases of the veins.	84. Diseases of the lymphatic system.	85. Hemorrhages.	86. Other diseases of the circulatory system.	87. Laryngitis.	88. Other diseases of the larynx.	89. Diseases of the thyroid body.	90. Acute bronchitis.	91. Chronic bronchitis.	92. Broncho-pneumonia.	93. Pneumonia.	94. Pleurisy.	95. Congestion and apoplexy of the lungs.	96. Gangrene of the lungs.	97. Asthma.	98. Pulmonary emphysema.	99. Other diseases of the respiratory system.
.....	2	3	1	2
.....	1	2	2	1	1
.....	1	1	1	1
.....	2	1	1
.....
.....	1	1
.....	2	14	8	1	1	3	3	1	1
.....	3	1	1
.....	1	2
.....	1	1	1
.....	3	1	1	2
.....	2	1	1	1	1
.....
.....	1	2
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No. 7.—Continued.

Counties, 1912.—International Classification.

VI. DISEASES OF THE GENITO-URINARY SYSTEM AND ITS ADNEXA.													VII. THE PUERPERAL STATE.									
119. Acute nephritis.	120. Bright's disease.	121. Other diseases of the kidneys.	122. Calculi of the urinary tract.	123. Diseases of the bladder.	124. Diseases of the urethra.	125. Diseases of the prostate.	126. Non-venereal diseases of the male genital organs.	127. Metritis.	128. Uterine hemorrhage (non-puerperal).	129. Uterine tumor.	130. Other diseases of the uterus.	131. Cysts and other tumors of the ovary.	132. Other diseases of the female genital organs.	133. Non-puerperal diseases of the breast.	134. Accidents of pregnancy.	135. Puerperal hemorrhage.	136. Other accidents of labor.	137. Puerperal septicemia.	138. Puerperal albuminuria and convulsions.	139. Phlegmasia alba dolens (puerperal).	140. Other puerperal accidents.	141. Puerperal diseases of the breast.
...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	5	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
...
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	39	1	...	1	...	1	...	...	...	...	...	1	...	...	...	...	3	4	1	...	1	...
...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	21	1	...	1	...	1	...	...	...	...	...	...	...	1	1	...	2	3	...	...	...	...
...
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...
...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...
7	90	2	4	2	...	...	...	...	...	1	1	1	...	1	1	3	6	4	...	...	1	...

Table

Causes of Death arranged by Towns and

TOWNS IN HILLSBOROUGH COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.		150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Amherst.....											2	
Antrim.....	1										1	
Bedford.....											1	
Bennington.....												
Brookline.....												
Deering.....												
Francestown.....	1										1	
Goffstown.....	2								2		3	
Greenfield.....												
Greenville.....					1						1	
Hancock.....												
Hillsborough.....	1											1
Hollis.....												
Hudson.....												
Litchfield.....												
Lyndeborough.....												
Manchester.....	3			1	2				9	101	2	
Mason.....												
Merrimack.....					1						1	
Milford.....									1		2	
Mont Vernon.....												
Nashua.....	1								6	29	2	
New Boston.....									1			
New Ipswich.....												
Pelham.....									1			
Peterborough.....											2	
Sharon.....												
Temple.....												
Weare.....	1											
Wilton.....											2	
Windsor.....												
Total.....	10			1	4				20	146	4	1

No. 7.—Continued.

Counties, 1912.—International Classification.

XII. OLD AGE.		XIII. EXTERNAL CAUSES.																		XIV. ILL-DEFINED DISEASES.	
154. Senile debility.		155. Suicide by hanging or strangulation.																		156. Suicide by poisoning.	
1	1	1																		1	
9	1	1																		1	
1	3	1																		1	
2	1	1																		1	
23	4	3																		5	
2	1	1																		1	
11	1	1																		3	
1	1	1																		1	
4	1	1																		1	
1	1	1																		1	
64	5	6																		9	
155. Suicide by poisoning.		156. Suicide by asphyxia.																		157. Suicide by hanging or strangulation.	
158. Suicide by drowning.		159. Suicide by firearms.																		160. Suicide by cutting instruments.	
161. Suicide by jumping from high places.		162. Suicide by crushing.																		163. Other suicides.	
164. Fractures.		165. Dislocations.																		166. Other accidental traumatisms.	
167. Burns and scalds.		168. Burns from corrosive substances.																		169. Sunstroke.	
170. Freezing.		171. Electric shock.																		172. Accidental drowning.	
173. Inanition (starvation).		174. Absorption of deleterious gases (non-suicidal).																		175. Other acute poisonings.	
176. Other external violence.		177. Dropsy.																		178. Sudden death.	
179. Causes of death unspecified or ill-defined.		180. Causes of death unspecified or ill-defined.																		181. Causes of death unspecified or ill-defined.	
64		5																		9	

Table

Causes of Death arranged by Towns and

TOWNS IN CHESHIRE COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicæmia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.					
Alstead									1													1							
Chesterfield																						1							
Dublin																													
Fitzwilliam																						2							
Gilsum																						1							
Harrisville																						1							
Hinsdale									1													2							
Jaffrey																						1							
Keene	2			1	1		1					1										9		1					
Marlborough														1								2							
Marlow																													
Nelson																													
Richmond																						1							
Rindge																													
Roxbury																													
Stoddard																													
Sullivan																													
Surry																						1							
Swansey																						1							
Trov	1													1								4							
Walpole				1			1			1				1								3							
Westmoreland												1				1						6							
Winchester																						2							
Total	3			2	1	1	1	1	2			2		2	1	1						37		1					

Table

Causes of Death arranged by Towns and

TOWNS IN CHESHIRE COUNTY.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																		
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal: 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.	75. Diseases of the eye.	76. Diseases of the ear.	
Alstead.....						2													
Chesterfield.....						2													
Dublin.....						1													
Fitzwilliam.....								1											
Gilsum.....																			
Harrisville.....																			
Hinsdale.....						1													
Jaffrey.....		1			1	2													
Keene.....					1	17		5					1						
Marlborough.....				1							1								
Marlow.....																			
Nelson.....						1													
Richmond.....						1													
Rindge.....						2													
Roxbury.....						1													
Stoddard.....						1													
Sullivan.....																			
Surry.....																			
Swanzey.....						3													
Troy.....						2					1								
Walpole.....								1											
Westmoreland.....						1			1										
Winchester.....					1	3		1											
Total.....	1			1	3	40		8		1	2		1						

No. 7.—Continued.

Counties, 1912.—International Classification.

III. DISEASES OF THE CIRCULATORY SYSTEM.										IV. DISEASES OF THE RESPIRATORY SYSTEM.												
77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries.	82. Embolism and thrombosis.	83. Diseases of the veins.	84. Diseases of the lymphatic system.	85. Hemorrhages.	86. Other diseases of the circulatory system.	87. Laryngitis.	88. Other diseases of the larynx.	89. Diseases of the thyroid body.	90. Acute bronchitis.	91. Chronic bronchitis.	92. Broncho-pneumonia.	93. Pneumonia.	94. Pleurisy.	95. Congestion and apoplexy of the lungs.	96. Gangrene of the lungs.	97. Asthma.	98. Pulmonary emphysema.	99. Other diseases of the respiratory system.
.....	2	1	1	1
.....	1	1
.....	2	1
.....	1
.....	2
.....	1
.....	2
.....	1
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Table

Causes of Death arranged by Towns and

TOWNS IN CHESHIRE COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.																		
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhœa and enteritis (under 2 years).	106. Diarrhœa and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.	118. Appendicitis.
Alstead.....																			
Chesterfield.....	1																		
Dublin.....																			
Fitzwilliam.....					1														
Gilsum.....																			
Harrisville.....																			1
Hinsdale.....					1	1										1			
Jaffrey.....					1														
Keene.....					2	4			2	2			1			1	3		2
Marlborough.....					2	1			1										
Marlow.....																			
Nelson.....																			
Richmond.....				1															
Rindge.....					1														
Roxbury.....																			
Stoddard.....																			
Sullivan.....																			
Surry.....																			
Swanzey.....					1								1						
Troy.....					1	1													
Walpole.....						2	1			1							1		
Westmoreland.....					1														
Winchester.....					3				1						1				
Total.....	1		1	1	14	9	1		4	3			2		3		4		5

Table

Causes of Death arranged by Towns and

TOWNS IN CHESHIRE COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.		150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Alstead.....									1	2	1	
Chesterfield.....									1			
Dublin.....												
Fitzwilliam.....												
Gilsum.....										1		
Harrisville.....											1	
Hinsdale.....										1		
Jaffrey.....										3	3	
Keene.....	2								1	8	2	
Marlborough.....										2		
Marlow.....												
Nelson.....												
Richmond.....												
Rindge.....	1											
Roxbury.....												
Stoddard.....												
Sullivan.....										1		
Surry.....												
Swanzey.....	1									1	1	
Troy.....											1	
Walpole.....										1		
Westmoreland.....												
Winchester.....	1		1							1		
Total.....	5		1						3	21	9	....

Table

Causes of Death arranged by Towns and

TOWNS IN SULLIVAN COUNTY.	I. GENERAL DISEASES.																													
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicemia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.						
Acworth.....																														
Charlestown.....					1	1								1								1								
Claremont.....							3	1	1							1						5	4							
Cornish.....																						1								
Croydon.....																														
Goshen.....																														
Grantham.....																														
Langdon.....																														
Lempster.....																														
Newport.....							2									1						4	2							
Plainfield.....																							1							
Springfield.....																												1		
Sunapee.....	1																													
Unity.....																							1							
Washington.....																														
Total.....	1				1	1	5	1	1					1	2						11	8	1							

Table

Causes of Death arranged by Towns and

TOWNS IN SULLIVAN COUNTY.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																	
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.	75. Diseases of the eye.	76. Diseases of the ear.
Acworth.....												1						
Charlestown.....						2												
Claremont.....		1		1	16		1		1	2		1	1					
Cornish.....						1	1											
Croydon.....						3												
Goshen.....						1					2							
Grantham.....																		
Langdon.....																		
Lempster.....		1																
Newport.....		2			2	11		3								1		1
Plainfield.....																		
Springfield.....																		
Sunapee.....						3												
Unity.....					2													
Washington.....																		
Total.....	4			1	4	36	1	5		1	4	2	1			1		1

No. 7.—Continued.

Counties, 1912.—International Classification.

III. DISEASES OF THE CIRCULATORY SYSTEM.										IV. DISEASES OF THE RESPIRATORY SYSTEM.												
77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries.	82. Embolism and thrombosis.	83. Diseases of the veins.	84. Diseases of the lymphatic system.	85. Hemorrhages.	86. Other diseases of the circulatory system.	87. Laryngitis.	88. Other diseases of the larynx.	89. Diseases of the thyroid body.	90. Acute bronchitis.	91. Chronic bronchitis.	92. Broncho-pneumonia.	93. Pneumonia.	94. Pleurisy.	95. Congestion and apoplexy of the lungs.	96. Gangrene of the lungs.	97. Asthma.	98. Pulmonary emphysema.	99. Other diseases of the respiratory system.
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
1	4	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2	.....	.....	.....	.....	.....	.....	.....
.....	1	14	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	14	.....	2	.....	.....	.....	.....	.....
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....
.....
.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	8	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	2	2	.....	2	.....	.....	.....	.....	.....	.....
.....	3	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....
.....
.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	1	.....	.....	.....	.....	.....	.....
.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
.....
1	1	38	3	11	4	.....	.....	.....	.....	.....	.....	.....	2	6	9	23	.....	2	.....	.....	.....	.....

Table

Causes of Death arranged by Towns and

TOWNS IN SULLIVAN COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.																		
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhœa and enteritis (under 2 years).	106. Diarrhœa and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.	118. Appendicitis.
Acworth.....																		1	
Charlestown.....							1											1	
Claremont.....					2	2								1				1	
Cornish.....																			
Croydon.....																			
Goshen.....			1																
Grantham.....																			
Langdon.....																			
Lempster.....																			
Newport.....					2				1						2			1	
Plainfield.....																			
Springfield.....																			
Sunapee.....												1			1				
Unity.....					1										1				
Washington.....																			
Total.....			1		5	2	1		1				1	1	4		4		

No. 7.—Continued.

Counties, 1912.—International Classification.

VI. DISEASES OF THE GENITO-URINARY SYSTEM AND ITS ADNEXA.														VII. THE PUERPERAL STATE.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
119. Acute nephritis.														120. Bright's disease.														121. Other diseases of the kidneys.														122. Calculi of the urinary tract.														123. Diseases of the bladder.														124. Diseases of the urethra.														125. Diseases of the prostate.														126. Non-venereal diseases of the male genital organs.														127. Metritis.														128. Uterine hemorrhage (non-puerperal).														129. Uterine tumor.														130. Other diseases of the uterus.														131. Cysts and other tumors of the ovary.														132. Other diseases of the female genital organs.														133. Non-puerperal diseases of the breast.														134. Accidents of pregnancy.														135. Puerperal hemorrhage.														136. Other accidents of labor.														137. Puerperal septicemia.														138. Puerperal albuminuria and convulsions.														139. Phlegmasia alba dolens (puerperal).														140. Other puerperal accidents.														141. Puerperal diseases of the breast.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Table

Causes of Death arranged by Towns and

TOWNS IN SULLIVAN COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.			
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.		150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Acworth.....											1	1	....
Charlestown.....													....
Claremont.....	1										2		....
Cornish.....													....
Croydon.....													....
Goshen.....													....
Grantham.....												1	....
Langdon.....													....
Lempster.....													....
Newport.....										1	1		....
Plainfield.....										1			....
Springfield.....											2		....
Sunapee.....													....
Unity.....													....
Washington.....													....
Total.....	1									2	6	2	....

No. 7.—Continued.

Counties, 1912.—International Classification.

XII. OLD AGE.		XIII. EXTERNAL CAUSES.																				XIV. ILL-DEFINED DISEASES.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
154. Senile debility.		155. Suicide by poison.		156. Suicide by asphyxia.		157. Suicide by hanging or strangulation.		158. Suicide by drowning.		159. Suicide by firearms.		160. Suicide by cutting instruments.		161. Suicide by jumping from high places.		162. Suicide by crushing.		163. Other suicides.		164. Fractures.		165. Dislocations.		166. Other accidental traumatisms.		167. Burns and scalds.		168. Burns from corrosive substances.		169. Sunstroke.		170. Freezing.		171. Electric shock.		172. Accidental drowning.		173. Inanition (starvation).		174. Absorption of deleterious gases (non-suicidal).		175. Other acute poisonings.		176. Other external violence.		177. Dropsy.		178. Sudden death.		179. Causes of death unspecified or ill-defined.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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Table

Causes of Death arranged by Towns and

TOWNS IN GRAFTON COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicemia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	25. Pellagra.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.				
Alexandria.....						1																							
Ashland.....																						3							
Bath.....																							5						
Benton.....																							2						
Bethlehem.....																1													
Bridgewater.....																													
Bristol.....									2													3							
Campton.....																							1						
Canaan.....																						1							
Dorchester.....																						1							
Easton.....																													
Ellsworth.....																													
Enfield.....									1													2							
Franconia.....																													
Grafton.....																						3							
Groton.....														1															
Hanover.....	1								1					1		1													
Haverhill.....	1				1																1	1							
Hebron.....																					1	4							
Holderness.....																						1							
Landaff.....																													
Lebanon.....	1				1				1							2						4							
Lincoln.....	1													1															
Lisbon.....														1								2							
Littleton.....	1				1											1						4	1						
Livermore.....																													
Lyman.....																													
Lyme.....						1			1															1					
Monroe.....																						1							
Orange.....																1													
Orford.....																													
Piermont.....				1										2															
Plymouth.....																						4		1					
Rumney.....																													
Thornton.....																						1							
Warren.....																													
Waterville.....																													
Wentworth.....																						1							
Woodstock.....																													
Total.....	5			1	3	2			6					6		6					1	1	4	3					

Table

Causes of Death arranged by Towns and

TOWNS IN GRAFTON COUNTY.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																		
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.	75. Diseases of the eye.	76. Diseases of the ear.	
Alexandria.....																			
Ashland.....	1				1		1	1					1						
Bath.....																			
Benton.....																			
Bethlehem.....		1			1	3													
Bridgewater.....																			
Bristol.....	1																		
Campton.....						2													
Canaan.....																1		1	
Dorchester.....																			
Easton.....																			
Ellsworth.....																			
Enfield.....						1													
Franconia.....						1													
Grafton.....						2	1												
Groton.....																			
Hanover.....										1				1					
Haverhill.....	1					5				1						1			
Hebron.....																			
Holderness.....				2	1	1													
Landaff.....						1													
Lebanon.....						8		1					1						
Lincoln.....																			
Lisbon.....						7	1						1			1			
Littleton.....						11							1						
Livermore.....																			
Lyman.....																			
Lyme.....						2													
Monroe.....						1													
Orange.....											1								
Orford.....						2													
Piermont.....																			
Plymouth.....	1	2				2		3		1			1			1			
Rumney.....				1		3		1											
Thornton.....		1				1													
Warren.....						1													
Waterville.....																			
Wentworth.....		1				1										1			
Woodstock.....						2													
Total.....	4	5		3	3	57	3	6		1	3		5	1		5		1	

No. 7.—Continued.

Counties, 1912.—International Classification.

III. DISEASES OF THE CIRCULATORY SYSTEM.											IV. DISEASES OF THE RESPIRATORY SYSTEM.											
77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries.	82. Embolism and thrombosis.	83. Diseases of the veins.	84. Diseases of the lymphatic system.	85. Hemorrhages.	86. Other diseases of the circulatory system.	87. Laryngitis.	88. Other diseases of the larynx.	89. Diseases of the thyroid body.	90. Acute bronchitis.	91. Chronic bronchitis.	92. Broncho-pneumonia.	93. Pneumonia.	94. Pleurisy.	95. Congestion and apoplexy of the lungs.	96. Gangrene of the lungs.	97. Asthma.	98. Pulmonary emphysema.	99. Other diseases of the respiratory system.
.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....	.....	.....	.....	.....
.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
.....	.....	5	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	1	.....	.....	.....	.....	.....	.....
.....	.....	5	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
.....	.....	3	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	1	.....	.....	1	.....	.....
.....	.....	1	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
.....	1	1	1	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1
.....	7	7	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	4	.....	.....	.....	.....	.....	.....
.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....
2	3	5	2	2	.....	.....	.....	.....	.....	.....	.....	1	2	1	.....	5	.....	.....	.....	.....	.....	.....
.....	.....	4	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
.....	2	4	3	1	1	.....	.....	.....	.....	1	.....	3	.....	.....	.....	5	1	.....	.....	.....	.....	.....
.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	10	1	.....	.....	.....	.....	.....
.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....	.....	.....	.....	.....	.....
.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
.....	.....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	2	3	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	1	3	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	1	.....	.....	.....	.....	.....
.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
.....
2	9	57	10	22	5	.....	.....	.....	.....	1	.....	.....	5	4	8	62	3	7	.....	1	.....	1

Table

Causes of Death arranged by Towns and

TOWNS IN GRAFTON COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.																		
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhœa and enteritis (under 2 years).	106. Diarrhœa and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.	118. Appendicitis.
Alexandria.....							1												
Ashland.....																			
Bath.....																			
Benton.....					1														
Bethlehem.....							1						1					1	
Bridgewater.....																			
Bristol.....																			
Campton.....																			
Canaan.....						1													
Dorchester.....																			
Easton.....																			
Ellsworth.....																			
Enfield.....					2														
Franconia.....																			
Grafton.....					1				1										
Groton.....																			
Hanover.....					3				4	2									
Haverhill.....				1	3														
Hebron.....																			
Holderness.....																			
Landaff.....					1														
Lebanon.....					2	4	1	1			1								
Lincoln.....					1	1			1		1								
Lisbon.....					1				1										
Littleton.....					2	2					1		1						
Livermore.....																			
Lyman.....																			
Lyme.....				1		1													
Monroe.....							1												
Orange.....																			
Orford.....					1														
Piermont.....																			
Plymouth.....									1	1								1	
Rumney.....					2														
Thornton.....																			
Warren.....							1												
Waterville.....																			
Wentworth.....					1														
Woodstock.....																			
Total.....	2	21	9	5	1			1	8	6			2		3	1	6	1	1

No. 7.—Continued.

Counties, 1912.—International Classification.

VI. DISEASES OF THE GENITO-URINARY SYSTEM AND ITS ADNEXA.													VII. THE PUERPERAL STATE.									
119. Acute nephritis.	120. Bright's disease.	121. Other diseases of the kidneys.	122. Calculi of the urinary tract.	123. Diseases of the bladder.	124. Diseases of the urethra.	125. Diseases of the prostate.	126. Non-venereal diseases of the male genital organs.	127. Metritis.	128. Uterine hemorrhage (non-puerperal).	129. Uterine tumor.	130. Other diseases of the uterus.	131. Cysts and other tumors of the ovary.	132. Other diseases of the female genital organs.	133. Non-puerperal diseases of the breast.	134. Accidents of pregnancy.	135. Puerperal hemorrhage.	136. Other accidents of labor.	137. Puerperal septicemia.	138. Puerperal albuminuria and convulsions.	139. Phlegmasia alba dolens (puerperal).	140. Other puerperal accidents.	141. Puerperal diseases of the breast.
1	1																	1				
1	1																					
1																						
																	</					

Table

Causes of Death arranged by Towns and

TOWNS IN GRAFTON COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.		150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Alexandria.....									1			
Ashland.....											2	
Bath.....											1	
Benton.....												
Bethlehem.....												
Bridgewater.....												
Bristol.....										2		
Campton.....												
Canaan.....										2		
Dorchester.....										2		
Easton.....												
Ellsworth.....										2		
Enfield.....										1		
Franconia.....												
Grafton.....									1			
Groton.....												
Hanover.....												
Haverhill.....			2									
Hebron.....												
Holderness.....	1								1			
Landaff.....									1			
Lebanon.....									1	7		
Lincoln.....											1	
Lisbon.....									2			
Littleton.....									1	3		
Livermore.....												
Lyman.....												
Lyme.....												
Monroe.....												
Orange.....												
Orford.....										1		
Piermont.....												
Plymouth.....	1								2	3	1	
Rumney.....				1						1		
Thornton.....										2	2	
Warren.....										1		
Waterville.....												
Wentworth.....										1	1	
Woodstock.....										1		
Total.....	2		2	1					10	29	8	

Table

Causes of Death arranged by Towns and

TOWNS IN COÖS COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicemia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.					
Berlin.....	2		1		1	16	8	1							2							8	3	2					
Carroll.....																													
Clarksville.....																													
Colebrook.....								1																1					
Columbia.....																						1							
Dalton.....																													
Dummer.....						1																							
Errol.....																													
Gorham.....						1																	5						
Jefferson.....																						1							
Lancaster.....						1																3							
Milan.....																						1							
Millsfield.....																													
Northumberland.....						1																1							
Pittsburg.....																													
Randolph.....					1																								
Shelburne.....																													
Stark.....																													
Stewartstown.....																							5						
Stratford.....							1																						
Whitefield.....																						1	1						
Total.....	2		1	1	2	19	9	2							2							26	4	3					

Table

Causes of Death arranged by Towns and

TOWNS IN COÖS COUNTY.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																	
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.	75. Diseases of the eye.	76. Diseases of the ear.
Berlin.....	1					5	2	2								1		
Carroll.....						3												
Clarksville.....																		
Colebrook.....	1					2										1		
Columbia.....																		
Dalton.....						1												
Dummer.....																		
Errol.....																		
Gorham.....	1					2							1			1		
Jefferson.....																		
Lancaster.....	3							1										1
Milan.....										1								
Millsfield.....																		
Northumberland.....	2					3		2										
Pittsburg.....																		
Randolph.....																		
Shelburne.....																		
Stark.....						1												
Stewartstown.....						1												
Stratford.....						2		1										
Whitefield.....						2		1										
Total.....	8					22	2	7		1			1			3		1

Table

Causes of Death arranged by Towns and

TOWNS IN COÖS COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.																		
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhœa and enteritis (under 2 years).	106. Diarrhœa and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.	118. Appendicitis.
Berlin.....	1					16			4						1		2		
Carroll.....																			
Clarksville.....															1				
Colebrook.....									1										
Columbia.....							1												
Dalton.....					1														
Dummer.....																			
Errol.....																			
Gorham.....																			
Jefferson.....																			
Lancaster.....																			
Milan.....																			
Millsfield.....																			
Northumberland.....																			
Pittsburg.....													1				1		
Randolph.....																			
Shelburne.....																			
Stark.....																			
Stewartstown.....					1														
Stratford.....							1					1							
Whitefield.....						1								1					
Total.....	1				2	17	2		5				2	1	2		3		

No. 7.—Continued.

Counties, 1912.—International Classification.

[illegible]

Table

Causes of Death arranged by Towns and

TOWNS IN COÖS COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.		150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Berlin.....										20	1	....
Carroll.....											
Clarksville.....											
Colebrook.....										1		....
Columbia.....										1		....
Dalton.....											
Dummer.....											
Errol.....											
Gorham.....										1	1	....
Jefferson.....											
Lancaster.....			1							2		....
Milan.....											
Millsfield.....											
Northumberland.....										4		....
Pittsburg.....											
Randolph.....										1		....
Shelburne.....											
Stark.....											
Stewartstown.....									1	3	1	....
Stratford.....				1						1		....
Whitefield.....										2		....
Total.....			1	1					1	36	3	....

No. 7.—Continued.

Counties, 1912.—International Classification.

[illegible]

Table
Recapitulation

COUNTIES.	I. GENERAL DISEASES.																											
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicemia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	25. Pellagra.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.			
Rockingham.....	2	..	..	1	..	9	3	1	9	..	..	1	..	..	..	2	..	..	..	..	..	1	57	3	3
Strafford.....	7	..	..	..	..	5	15	1	5	..	..	4	..	1	..	2	..	..	..	..	..	1	40	2	1
Belknap.....	..	..	..	..	..	..	3	1	6	..	..	..	..	..	..	..	..	..	..	..	..	..	11	1	..
Carroll.....	1	..	..	..	1	..	1	..	4	..	..	..	..	1	..	1	..	..	..	..	..	..	6	1	..
Merrimack.....	5	..	2	3	..	1	2	..	2	..	..	3	..	5	..	7	..	..	..	..	..	1	49	1	3
Hillsborough.....	10	1	..	2	3	6	15	7	5	..	..	2	..	2	..	11	..	..	..	..	..	3	114	20	5
Cheshire.....	3	..	..	2	1	1	1	1	2	..	..	2	..	2	1	1	..	..	..	..	..	..	37	..	1
Sullivan.....	1	..	..	..	1	1	5	1	1	..	..	..	..	1	..	2	..	..	..	..	..	..	11	8	1
Grafton.....	5	..	..	1	3	2	..	..	6	..	..	..	..	6	..	6	..	..	..	..	1	1	43	3	1
Coös.....	2	..	..	1	1	2	19	9	2	..	..	..	..	..	..	2	..	..	..	..	..	..	26	4	3
Total.....	36	1	2	10	10	27	64	21	42	..	..	12	..	18	1	34	..	..	..	..	1	7	394	43	18

No. 7.—Continued.

by Counties, 1912.

I. GENERAL DISEASES.—Continued.

30. Pott's disease.	31. Cold abscess, abscess by congestion.	32. White swelling.	33. Tuberculosis of other organs.	34. General tuberculosis.	35. Scrofula.	36. Syphilis.	37. Gonorrhea (5 years and over).	38. Gonorrhea (under 5 years).	39. Cancer and other malignant tumors of the buccal cavity.	40. Cancer of stomach and liver.	41. Cancer of intestines.	42. Cancer of genital organs.	43. Cancer of breast.	44. Cancer of skin.	45. Cancer of other or unspecified organs.	46. Tumors.	47. Acute articular rheumatism.	48. Chronic rheumatism and gout.	49. Scurvy.	50. Diabetes.	51. Exophthalmic goiter.	52. Addison's disease.	53. Leukemia.	54. Anemia, chlorosis.	55. Other general diseases.	56. Acute and chronic alcoholism.	57. Chronic lead poisoning.	59. Other chronic poisonings.
...	1	...	...	...	...	3	27	9	11	3	...	12	1	2	...	...	6	...	...	1	1	1	6	...	...
...	1	...	...	...	...	4	15	7	8	5	1	10	...	1	2	...	7	...	...	...	6	...	1	...	1
2	1	...	...	...	...	1	9	4	5	...	1	4	1	...	2	...	5	...	...	1	...	...	2	...	...
...	1	...	1	...	...	2	5	4	1	2	4	4	...	1	1	...	4	...	...	...	1	...	...	...	1
...	21	6	9	4	3	10	...	3	2	...	9	...	...	2	10	3	8	...	...
2	3	2	...	3	...	...	6	41	14	19	15	3	27	1	3	...	...	23	1	1	...	14	...	9	...	...
...	2	...	...	1	13	3	5	1	1	3	2	4	...	...	3	...	...	4	...	...	...	...	...
...	8	4	3	4	1	1	...	1	2	...	2	...	1	1	...	...	...	...	...
1	...	1	...	...	...	...	...	...	3	12	13	3	...	2	6	...	2	...	...	10	1	1	2	8	...	...	...	...
1	1	9	9	1	3	...	4	...	...	...	...	4	...	...	4	4	...	3	...	1
6	...	1	3	5	1	6	...	...	21	160	73	65	37	16	81	5	17	9	...	73	2	3	11	48	4	29	...	3

Table Recapitulation

COUNTIES.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																		
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.	75. Diseases of the eye.	76. Diseases of the ear.	
Rockingham.....	3	3	..	2	6	85	4	20	1	..	3	1	7	..	..	3	..	1
Strafford.....	..	9	..	2	3	55	..	17	..	1	3	1	2	..	..	5	..	..
Belknap.....	..	4	..	1	4	33	..	17	..	2	2	...	2	1	..	1	..	..
Carroll.....	..	1	..	..	2	13	..	3	..	..	1	...	1	..	..	..	..	..
Merrimack.....	1	4	..	1	6	109	1	14	13	13	4	1	3	..	..	16	..	..
Hillsborough.....	2	36	..	3	11	141	7	24	..	2	3	1	27	3	..	11	..	6	
Cheshire.....	..	1	..	1	3	40	..	8	..	1	2	...	1	..	..	..	..	..
Sullivan.....	..	4	..	1	4	36	1	5	..	1	4	2	1	..	..	1	..	1
Grafton.....	4	5	..	3	3	57	3	6	..	1	3	...	5	1	..	5	..	1	
Coös.....	..	8	..	..	..	22	2	7	..	1	..	...	1	..	..	3	..	1
Total.....	10	75	..	14	42	591	18	121	14	22	25	6	50	5	..	45	..	10	

No. 7.—Continued.

by Counties, 1912.

III. DISEASES OF THE CIRCULATORY SYSTEM.													IV. DISEASES OF THE RESPIRATORY SYSTEM.												
77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries.	82. Embolism and thrombosis.	83. Diseases of the veins.	84. Diseases of the lymphatic system.	85. Hemorrhages.	86. Other diseases of the circulatory system.	87. Laryngitis.	88. Other diseases of the larynx.	89. Diseases of the thyroid body.	90. Acute bronchitis.	91. Chronic bronchitis.	92. Broncho-pneumonia.	93. Pneumonia.	94. Pleurisy.	95. Congestion and apoplexy of the lungs.	96. Gangrene of the lungs.	97. Asthma.	98. Pulmonary emphysema.	99. Other diseases of the respiratory system.			
.....	6	101	12	37	12	.....	2	.....	.....	1	.....	.....	6	13	11	73	3	12	.....	1	.....	.....	
.....	6	66	7	7	3	.....	1	.....	1	2	1	.....	3	4	17	34	1	5	1	2	.....	.....	
.....	3	41	5	9	2	1	.....	.....	.....	.....	.....	.....	5	3	6	25	.....	4	.....	.....	.....	.....
1	.....	30	5	10	3	.....	.....	.....	.....	.....	.....	.....	1	2	4	23	2	3	.....	1	.....	.....	
1	9	139	13	17	13	.....	1	.....	.....	1	2	.....	4	7	14	53	1	9	.....	.....	.....	.....
.....	35	176	10	61	28	1	1	2	.....	3	.....	.....	42	21	59	137	8	22	.....	6	2	1
2	7	48	7	13	3	.....	1	.....	.....	.....	1	.....	4	12	4	33	.....	10	.....	.....	.....	.....
1	1	38	3	11	4	.....	.....	.....	.....	.....	.....	.....	2	6	9	23	.....	2	.....	.....	.....	.....
2	9	57	10	22	5	.....	.....	.....	.....	1	.....	.....	5	4	8	62	3	7	.....	1	.....	1
1	1	30	.....	2	3	.....	.....	1	1	.....	.....	.....	2	5	15	42	1	3	.....	1	.....	.....	
8	77	726	72	189	76	2	1	7	1	6	4	4	74	77	147	505	19	77	1	11	3	2			

Table
Recapitulation

COUNTIES.	V. DISEASES OF THE DIGESTIVE SYSTEM.																	
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhœa and enteritis (under 2 years).	106. Diarrhœa and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.	118. Appendicitis.
Rockingham.....	1	14	17	5	..	5	3	..	4	..	1	..	8	3
Strafford.....	2	16	15	5	..	3	3	1	5	..	..	7	..	..	1	
Belknap.....	14	6	4	..	1	1	..	3	1	1	..	3	..	1	
Carroll.....	10	2	2	..	1	1	..	..	..	1	..	2	..	..
Merrimack.....	1	15	12	17	..	5	..	..	9	1	4	..	5	..	3	
Hillsborough.....	..	6	3	35	130	22	..	12	4	2	17	2	10	..	11	..	15	
Cheshire.....	..	1	1	14	9	1	..	4	3	..	2	..	3	..	4	..	3	
Sullivan.....	1	5	2	1	..	1	..	..	1	1	4	..	4	..	..
Grafton.....	2	21	9	5	1	8	6	..	2	..	3	1	6	1	1	
Coös.....	..	1	..	2	17	2	..	5	..	..	2	1	2	..	3	..	..
Total.....	..	8	11	146	219	64	1	45	21	3	45	6	29	1	53	1	27	

No. 7.—Continued.

by Counties, 1912.

VI. DISEASES OF THE GENITO-URINARY SYSTEM AND ITS ADNEXA.														VII. THE PUERPERAL STATE.									
119. Acute nephritis.	120. Bright's disease.	121. Other diseases of the kidneys.	122. Calculi of the urinary tract.	123. Diseases of the bladder.	124. Diseases of the urethra.	125. Diseases of the prostate.	126. Non-venereal diseases of the male genital organs.	127. Metritis.	128. Uterine hemorrhage (non-puerperal).	129. Uterine tumor.	130. Other diseases of the uterus.	131. Cysts and other tumors of the ovary.	132. Other diseases of the female genital organs.	133. Non-puerperal diseases of the breast.	134. Accidents of pregnancy.	135. Puerperal hemorrhage.	136. Other accidents of labor.	137. Puerperal septicemia.	138. Puerperal albuminuria and convulsions.	139. Phlegmasia alba dolens (puerperal).	140. Other puerperal accidents.	141. Puerperal diseases of the breast.	
5	68	1	8	1						1						1		3	3				
7	56		3					1		2			2		1			4	1				
4	25		2													1		1					
3	17					1												1	1				
2	50	2	2	2						1		1				2		1					
7	90	2	4	2						1	1	1			1	1	3	6	4		1		
1	46	1				1				1	1				1				1		1		
7	37		3										1					1	1				
7	46		3	3						1	1		1		1	1		4	2		1		
1	29		2	1								1			1			2	2				
44	464	6	27	11				1		6	4	3	4		5	6	3	23	15		3		

Table
Recapitulation

COUNTIES.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.		150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Rockingham.....	3				3				8	24	6	
Strafford.....	2				1	1			5	27	12	
Belknap.....	4								1	15	4	
Carroll.....									1	9	1	
Merrimack.....	4								9	36	3	
Hillsborough.....	10			1	4				20	146	4	1
Cheshire.....	5		1						3	21	9	
Sullivan.....	1								2	6	2	
Grafton.....	2		2	1					10	29	8	
Coös.....			1	1					1	36	3	
Total.....	31		4	3	8	1			60	*349	52	1

* Included under this title 203 premature births.

No. 7.—*Concluded.*

by Counties, 1912.

XII. OLD AGE.		XIII. EXTERNAL CAUSES.																XIV. ILL-DEFINED DISEASES.																																	
154. Senile debility.		155. Suicide by poison.		156. Suicide by asphyxia.		157. Suicide by hanging or strangulation.		158. Suicide by drowning.		159. Suicide by firearms.		160. Suicide by cutting instruments.		161. Suicide by jumping from high places.		162. Suicide by crushing.		163. Other suicides.		164. Fractures.		165. Dislocations.		166. Other accidental traumatisms.		167. Burns and scalds.		168. Burns from corrosive substances.		169. Sunstroke.		170. Freezing.		171. Electric shock.		172. Accidental drowning.		173. Inanition (starvation).		174. Absorption of deleterious gases (non-suicidal).		175. Other acute poisonings.		176. Other external violence.		177. Dropsy.		178. Sudden death.		179. Causes of death unspecified or ill-defined.	
34	1	..	5	2	3	2	2	14	3	..	1	..	1	8	..	1	1	1	1	1	1	6									
27	1	..	2	..	4	17	4	2	1	4	4	4								
24	..	2	1	1	3	8	1	..	6	1	1	1									
13	1	1	..	1	1	10	4	2								
34	2	..	3	..	2	20	2	..	3	4	2	1	1	1	8									
64	..	5	6	2	2	1	47	8	..	4	..	1	14	..	1	..	9	21										
26	1	..	1	..	1	5	2	..	1	1	1	13	2	2	6										
22	2	..	3	12	2	3	..	2	..	1	2										
44	2	..	2	29	4	4	..	1	2	2	2	7										
17	1	..	2	18	1	..	1	1	..	6	1	2	10										
305	7	7	24	6	20	4	3	180	26	..	10	5	4	66	..	5	12	17	5	5	65										

Table No. 8.
Deaths by Ages, Sex and Months, by Counties and Towns, 1912.
(Not including still births.)

TOWNS IN ROCKINGHAM COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Atkinson.....	Males.....	..	..	..	..	..	..	..	1	1	..	1	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	..	3	5
	Females.....	..	..	..	..	..	..	..	..	..	..	2	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	2	..
Auburn.....	Males.....	1	..	..	..	..	1	1	..	1	3	..	..	..	..	1	..	1	..	..	1	1	..	..	..	1	3	..	7	8
	Females.....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Brentwood.....	Males.....	1	..	..	..	..	4	3	5	6	6	5	1	..	..	2	1	3	5	4	3	3	1	..	1	3	5	..	31	38
	Females.....	..	1	..	..	..	1	1	..	..	4	1	..	..	..	..	1	..	3	3	1	..	..	..	1	1	1	..	7	..
Candia.....	Males.....	..	..	..	..	..	..	..	1	4	5	..	1	..	..	2	1	1	1	..	2	1	..	1	2	..	..	..	12	19
	Females.....	..	..	..	..	..	..	..	..	4	2	1	..	..	..	..	..	..	1	..	3	1	..	..	1	1	..	..	7	..
Chester.....	Males.....	..	..	..	..	..	..	..	1	2	2	..	1	..	..	1	..	1	1	1	1	..	1	..	..	..	..	..	6	8
	Females.....	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	2	..
Danville.....	Males.....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	2	6
	Females.....	..	..	..	1	..	..	..	1	..	1	1	..	..	..	..	..	..	1	1	..	..	..	1	1	..	..	..	4	..
Deerfield.....	Males.....	2	..	..	..	..	1	..	1	4	..	5	..	..	..	3	..	1	..	1	1	1	1	2	1	3	..	..	13	18
	Females.....	1	..	..	..	..	..	..	1	..	2	1	..	..	..	..	3	..	..	..	..	..	1	..	..	..	..	..	5	..
Derry.....	Males.....	6	1	1	4	4	3	5	5	2	7	5	1	..	..	3	4	3	4	2	2	5	2	3	4	2	5	..	39	65
	Females.....	..	3	..	3	5	..	..	7	4	4	3	1	..	..	1	3	4	3	2	3	1	1	2	4	2	..	..	26	..
East Kingston	Males.....	..	..	..	..	..	1	1	..	..	2	1	..	..	..	..	..	1	1	..	..	..	..	..	1	2	..	..	5	8
	Females.....	..	..	..	..	..	..	..	..	..	2	1	..	..	..	..	..	1	..	..	..	..	..	..	1	1	..	..	3	..

[illegible]

[illegible]TOWNS IN
STRAFFORD COUNTY.[illegible]

REGISTRATION REPORT.

Table No. 8.—1912.—Continued.

TOWNS IN STRAFFORD COUNTY. —Continued.		Age Groups																Grand total.											
		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.		March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.
Mudbury.....	Males.....	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	1	2
	Females.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
Middleton.....	Males.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Females.....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1
Milton.....	Males.....	2	..	..	..	..	1	1	3	5	1	1	..	..	..	1	1	1	1	1	1	1	3	..	2	3	..	12	23
	Females.....	1	1	1	..	1	1	1	1	..	2	1	..	1	..	1	2	3	1	1	..	..	..	..	1	..	11	11	..
New Durham.....	Males.....	..	..	..	1	..	..	3	..	2	..	1	..	..	..	1	1	..	2	1	..	..	..	..	1	..	..	6	9
	Females.....	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	3	3	..
Rochester.....	Males.....	11	5	2	3	2	4	8	9	10	2	..	1	2	6	10	9	5	4	4	4	4	4	1	1	5	7	63	133
	Females.....	6	5	4	4	3	7	8	11	13	6	1	..	2	12	5	4	8	5	5	2	4	7	4	8	9	2	70	..
Rollinsford.....	Males.....	..	..	..	2	..	1	1	1	3	..	..	1	2	..	..	1	1	..	1	..	2	1	..	1	1	..	9	26
	Females.....	7	..	..	1	..	1	5	..	2	1	..	..	..	..	1	..	1	4	3	..	1	..	..	2	4	17	17	..
Somersworth ..	Males.....	11	1	1	4	3	1	6	9	3	2	1	..	5	1	1	3	7	3	1	6	1	4	2	2	7	..	42	101
	Females.....	12	2	1	4	2	2	10	8	5	7	..	..	2	7	7	7	6	5	6	6	4	7	2	4	3	59	59	..
Strafford.....	Males.....	1	1	..	..	..	..	1	1	2	2	..	..	..	..	1	1	2	1	1	1	..	1	..	1	1	..	8	20
	Females.....	..	..	1	..	1	..	1	2	2	6	..	..	..	..	..	1	1	1	2	..	2	2	2	1	1	12	12	..
Total.....	Males.....	48	8	4	13	16	15	45	54	57	24	4	1	5	32	30	28	25	29	21	22	19	29	19	24	32	310	665	
	Females.....	48	19	8	9	12	19	25	63	55	50	6	..	3	35	38	31	30	37	25	25	28	30	24	32	20	355	..	..

Table No. 8.—1912.—Continued.

TOWNS IN BELKNAP COUNTY.		DEATHS.														Total.	Grand total.										
		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.			January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
Alton.	Males.	1	1	1	2	2	2	2	2	2	7	1	1	1	2	2	2	2	2	1	1	3	3	2	2	1	16
	Females.	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	2	2	2	12
Barnstead.	Males.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	
	Females.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	
Belmont.	Males.	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	
	Females.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	
Centre Harbor.	Males.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	
	Females.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10	
Gilford.	Males.	2	1	1	2	4	3	4	1	1	1	1	1	1	2	2	2	2	1	1	2	2	1	1	1	1	13
	Females.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	
Gilmanton.	Males.	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12	
	Females.	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7	
Laconia.	Males.	13	2	1	2	5	7	10	14	15	25	11	4	8	9	18	5	9	11	8	11	5	11	8	4	14	109
	Females.	9	3	2	4	3	7	4	8	10	20	7	1	9	10	6	3	1	5	4	5	5	4	9	5	78	
Meredith.	Males.	2	1	1	1	1	1	1	1	1	3	4	3	4	4	3	1	3	2	2	2	2	2	2	1	17	
	Females.	2	1	1	1	1	1	1	1	1	2	3	3	2	2	1	1	1	1	1	1	2	1	1	1	11	
New Hampton.	Males.	1	1	1	1	1	1	1	1	1	2	2	2	3	3	1	4	1	2	2	1	1	1	1	2	7	
	Females.	1	1	1	1	1	1	1	1	1	2	2	2	3	3	1	1	1	2	1	1	1	1	1	2	13	
Sanbornton.	Males.	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	5	
	Females.	1	1	1	1	1	1	1	1	1	2	1	2	1	1	1	1	1	1	1	2	1	1	1	1	6	
Tilton.	Males.	1	1	1	1	1	1	1	1	1	6	13	2	2	2	1	4	2	2	1	2	1	3	3	1	4	26
	Females.	1	1	1	1	1	1	1	1	1	5	6	2	2	2	4	1	4	1	1	3	2	2	1	2	21	
Total.	Males.	21	2	1	3	8	15	12	23	31	56	33	5	19	11	14	11	16	14	31	15	17	20	16	11	18	210
	Females.	15	6	2	6	5	13	11	15	24	40	22	2	1	15	17	15	17	14	13	10	10	16	12	13	11	162
																372											

Madison.....Males.....	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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TOWNS IN MERRIMACK COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
			1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	
Allentown.	Males.	6	1	..	1	2	1	2	1	1	..	4	11
	Females.	..	2	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	..	..	..	..	..	3	..	..	7	..
Andover.	Males.	3	..	2	..	..	..	..	1	..	1	2	..	..	..	1	3	..	..	1	1	..	2	1	..	..	6	16
	Females.	..	2	..	2	..	..	2	..	..	1	2	..	..	..	..	1	..	..	..	..	3	1	2	..	..	7	..

Table No. 8.—1912.—Continued.

TOWNS IN MERRIMACK COUNTY. —Continued.		Age Groups															Grand total.												
		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.		February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.
Boscawen.....	Males.....	1					3	4	7	7	2				3	1	3	2	2	2	2	1	1	2	3	2	3	24
	Females.....	1					1	1	3	2	3				1	2		2	1	1		1				2	....	12
Bow.....	Males.....									1																	....	1
	Females.....										1					1		1					1			....	2	
Bradford.....	Males.....																									1	....	4
	Females.....			1					1	3	2					3		1	1	1						....	3	
Canterbury.....	Males.....							1	1																		....	4
	Females.....	1						1	4	1					1		1	1	2			1			1	....	2	
Chichester.....	Males.....							2		2	2	1															....	7
	Females.....								1	1	1				1		1									....	3	
Concord.....	Males.....	27	5	3	6	19	17	21	40	34	49	15	1		3	14	18	18	15	22	18	20	26	28	22	18	21	240
	Females.....	16	6	4	5	6	22	15	27	34	43	30	2		24	20	16	22	17	13	11	17	17	12	19	20	....	210
Danbury.....	Males.....									1	1	1					1	1	1								....	3
	Females.....	1	1		1				1	1	1					1		1		1			1		2	....	6	
Dunbarton.....	Males.....																										....	3
	Females.....	1					2								1			1							1	....	3	
Epsom.....	Males.....						1	1		2							1					1	1	1		1	....	5
	Females.....	1							1	5							1		1			1	2		1	....	7	
Franklin.....	Males.....	4	2	1	1	4	2	2	7	5	6				3	6	2	1	4	2	2		3		3	2	8	34
	Females.....	2	1	1	3	1	1	10	7	11	6	1			4	5	2	5	5	4	4	4	4	4	2	3	2	44
Henniker.....	Males.....	1						1	1		2							2	1							2	6	
	Females.....	1	1				1	2	2	1	2				2	2	1		2	2	1	2			1	12		

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REGISTRATION REPORT.

Table No. 8.—1912.—Continued.

TOWNS IN HILLSBOROUGH COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.
Amherst.....	Males.....	1	1	1	1	1	1	1	1	4	2	2	2	2	2	2	1	2	2	2	2	1	1	1	2	1	1	1	9
	Females.....		1		1		1		1	3	4	4	4	4	1	1	1	2		1	1		1				4	10	
Antrim.....	Males.....	1														1	1	3	1	3	2		1						12
	Females.....	1		2	1				1	3	4				1	1	1	1		2	1	1	1	2	1	1	1	10	
Bedford.....	Males.....	1	1	1			1				2	2	2	2			1	2					2				1	5	
	Females.....	1	1		1		1		1	2	1	1	1	1		2		1			2					1	6		
Bennington.....	Males.....	4		1	2	3	2	1	2	2	2	2	2	2		2	1	1	1		1			2	2	2	2	12	
	Females.....	1			1	1	2	1	1	2	1					2	1					2	2	1	1		7		
Brookline.....	Males.....	1							1	1	1	1	1	1			2			1		1	1		1			3	
	Females.....				1				1	1	1	1	1	1						1							3		
Deering.....	Males.....																			1			1					3	
	Females.....	1								2									1	1					1				
Francestown.....	Males.....	1							1	4							1		1	1	1		2	2				6	
	Females.....			1						1	1						1											2	
Goffstown.....	Males.....	9	2	2	4	9	7	10	16	13	9	9	1	1		5	4	7	7	5	5	4	11	9	5	6	9	84	
	Females.....	1	1	2	4	10	5	5	9	12	7	7		2	2	4	3	7	5	2	3	8	3	6	5	6	4	56	
Greenfield.....	Males.....		1						1	1	2						1			1			1	1	1	1	1	5	
	Females.....						1											1		1							1		
Greenville.....	Males.....	1	1	1	1	1			2							1	1	1		1	1				2	1	1	5	
	Females.....	3	1		1	1		1			3					2	1	1		1		1		2	1			10	

DEATHS.

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Table No. 8.—1912.—Continued.

TOWNS IN CHESHIRE COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Alstead.	Males.	4						2		3							1	1	2	1	1		1		1			9	14	
	Females.	1									3	1						1	1					1	1	1		5		
Chesterfield.	Males.	2					1	1		1	2							3	1	1			1		1			7	8	
	Females.							1										1	1									1		
Dublin.	Males.							1	1									1					1					2	3	
	Females.										1										1							1		
Fitzwilliam.	Males.									2	2	2	2			1	1	1	1		1	1	2	1	1	1	1	6	11	
	Females.	1		2													1				1		2					5		
Gilsom.	Males.						1		1	1	1	1					1	2				1	1		1	1		4	7	
	Females.	1									1																	3		
Harrisville.	Males.	1								1	1						2			2		2	1	1		2		3	8	
	Females.	2								2	1	2	1			1														
Hinsdale.	Males.	2	1	3	2	1	2	1	2	1	3	2	1			2	1	3	1		2	2	3	4	1	1	1	16	29	
	Females.	2	1	1	1	2					3	1				2	2	3				1	3		2			13		
Jaffrey.	Males.	4	1	4		2		2	2	1	2	2				4	2	3		3	1	1	1	1		3		18	33	
	Females.	5	1	3		1		1	1	2	1	1						1	1	1	1	1	2	2	3	2		15		
Keene.	Males.	11	4	1	3	2	4	5	5	12	25	11	1		1	9	12	6	10	8	6	8	6	1	3	7	9	85	187	
	Females.	12	7	2	3	8	3	5	11	11	26	10	4			10	11	12	9	5	8	7	7	14	5	5	1	102		
Marlborough.	Males.	2		1		1		1	1	1	3	1	1			2	1	1	1	1	1	1	1			3	1	11	25	
	Females.	2	1					3	2	2	3	1				1	4	1		2	1			1	1	2		14		
Marlow.	Males.									1		1										2					2	2	5	
	Females.											2	1												1			3		
Nelson.	Males.																	1										1	1	
	Females.										1																			

DEATHS.

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Table No. 8.—1912.—Continued.

TOWNS IN SULLIVAN COUNTY.	DEATHS.																Grand total.											
	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.		March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.
Acworth.....Males.....	1						1				1	1			1		1		1		1			1				3
Females.....	1					1	1										1				1					1		4
Charlestown...Males.....	1					2	3	1	3	3	2					4	1			1	1	1	1	2	1	3		15
Females.....		2	3	2				1	3	5	4	1				5	2	1	2	2	1		3	2	2	1		21
Claremont....Males.....	3	3	4	7	6	8	8	6	8	10	8				9	7	5	5	9	4	2	4	1	3	4	6		59
Females.....	7	3	2	4	3	2	8	6	9	17	8	1			6	6	10	6	2	3	2	4	8	10	4	9		70
Cornish.....Males.....	1					1	1				1					1		1						1	1			4
Females.....										2	2				3	1												4
Croydon.....Males.....									1	1	1						3					1						3
Females.....									1																			1
Goshen.....Males.....								2												1			1					2
Females.....				1						1	1					1		1					1					3
Grantham....Males.....	1										1							1				1						2
Females.....																												
Langdon....Males.....									1	2					1	1				1	1							3
Females.....	1															1												1
Lempster....Males.....				1												1		1		1								1
Females.....			1			1	1	1	1	2						1		1							1			6
Newport....Males.....	4	1	2	3	2	3	3	5	4	9	3				7	3	3		4	4		3	3	7	2	2		38
Females.....	2	2	4	2	4	2	4	5	7	8	6	1			4	3	7	7	5	4	1	3	2	3	1	1		41
Plainfield...Males.....						1	1	1	2	5		1			1		1	1	1	1		1		1	2	3		12
Females.....	1							1		1	4				1					1	1	2						7

[illegible]

DEATHS.

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[illegible]

REGISTRATION REPORT.

Table No. 8.—1912.—Continued.

TOWNS IN COOS COUNTY.		Under 1.													90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
		1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.																					
Berlin.....	Males.....	29	14	3	6	8	6	8	6	4	2			2	7	7	7	7	7	8	12	12	3	13	6	8	6	.....	96	187	
	Females.....	28	16	11	1	8	5	4	2	6	4				8	3	4	5	9	9	9	11	6	5	9	9	.....	91			
Carroll.....	Males.....	1					1	1	1	1	1					1		1						1				.....	4	6	
	Females.....	1																								1		.....	2		
Clarksville.....	Males.....									1																1		.....	1	3	
	Females.....								1							1												.....	2		
Colebrook.....	Males.....					1	2	2	3	4	1			1		2	3			1	1	1	2	2		1		.....	14	28	
	Females.....	2			2	2	1		4	3							1	2	1	1	1	1	6	1				.....	14		
Columbia.....	Males.....	1		1																2								.....	2	5	
	Females.....	1			1				1						1							1	1					.....	3		
Dalton.....	Males.....								1	1																		.....	2	4	
	Females.....	1							1							1						1		1				.....	2		
Dummer.....	Males.....									1	1					2	1								1			.....	3	4	
	Females.....				1			1																				.....	1		
Errol.....	Males.....										1										1							.....	3	3	
	Females.....				1										1		1											.....			
Gorham.....	Males.....	8	1	1	3	3	1	3	1	1	1	1			2	3	2	3	3		3	3	1		1	1	4	.....	23	36	
	Females.....	2	1		1	3	1	2	1	1	1					2	1	2	2		1	2	1	1	1	1	.....	13			

Table

Recapitulation, Deaths by Ages, Sex

COUNTIES.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.
Rockingham....	Males.....	54	14	3	8	17	36	39	51	79	99	61
	Females.....	38	17	4	6	15	22	36	46	69	78	60
	Not stated.....											
Strafford.....	Males.....	48	8	4	13	16	15	16	45	54	57	24
	Females.....	48	19	8	9	12	19	25	38	63	55	50
	Not stated.....											
Belknap.....	Males.....	21	2	1	3	8	15	12	23	31	56	33
	Females.....	15	6	2	6	5	13	11	15	24	40	22
	Not stated.....											
Carroll.....	Males.....	13	4		1	6	4	9	19	28	30	22
	Females.....	7	1	1	5	2	8	6	9	18	18	19
	Not stated.....											
Merrimack....	Males.....	60	13	3	11	30	27	34	66	76	91	47
	Females.....	40	16	5	7	16	38	30	57	75	98	60
	Not stated.....											
Hillsborough..	Males.....	278	68	19	22	60	53	62	95	139	165	72
	Females.....	196	65	14	27	58	73	77	95	120	152	103
	Not stated.....	1										
Cheshire.....	Males.....	38	10	1	10	8	13	21	17	43	59	27
	Females.....	33	9	5	9	17	11	13	22	27	57	32
	Not stated.....											
Sullivan.....	Males.....	14	4	3	6	13	12	20	20	19	36	23
	Females.....	13	4	7	5	11	7	16	18	24	41	29
	Not stated.....											
Grafton.....	Males.....	49	11	2	14	16	23	29	44	65	82	52
	Females.....	43	11	2	11	23	22	21	32	44	63	46
	Not stated.....											
Coös.....	Males.....	51	19	3	10	12	18	16	25	28	24	13
	Females.....	46	18	13	7	16	21	12	12	20	30	18
	Not stated.....											
Total.....	Males.....	626	153	39	98	186	216	258	405	562	699	374
	Females.....	479	166	61	92	175	234	247	344	484	632	439
	Not stated.....	1										
Grand total.....		1106	319	100	190	361	450	505	749	1046	1331	813

No. 8.—*Concluded.*

and Months, by Counties, 1912.

90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
10 16	.... ....	6 2	45 46	35 44	49 34	47 38	32 37	36 36	35 32	32 24	41 30	35 33	43 31	46 24	1	477 409	886
4 6	1	5 3	32 35	30 38	28 31	25 30	29 37	21 25	22 25	19 28	29 30	19 24	24 32	32 20	.... ....	310 355	665
5 2	.... ....	.... 1	19 18	11 15	16 17	14 14	31 13	15 10	17 10	20 16	16 12	11 13	18 11	22 13	.... ....	210 162	372
4 2	.... ....	3 1	10 6	8 8	11 8	20 8	9 4	11 6	11 10	15 14	15 10	9 7	10 10	14 6	.... ....	143 97	240
5 6	.... ....	4	33 44	37 47	47 36	35 42	39 40	32 27	35 38	43 33	48 37	34 22	35 41	49 41	.... ....	467 448	915
5 18	3	6 3	99 88	95 72	103 104	83 81	81 82	60 58	83 82	95 95	80 93	80 83	90 84	98 84	.... ....	1047 1001	2049
9 7	.... ....	1	30 18	25 24	22 31	27 15	21 13	16 21	25 19	24 21	13 23	13 13	17 26	24 17	.... 1	257 242	499
2 5	.... ....	.... ....	22 16	16 20	16 22	9 17	17 10	11 16	10 8	14 11	9 19	19 20	13 7	16 14	.... ....	172 180	352
5 9	.... ....	5 1	48 36	33 39	38 43	35 25	25 33	40 24	31 15	21 19	27 23	30 26	38 25	31 20	.... ....	397 328	725
4 1	.... ....	7	15 19	21 11	20 16	17 16	18 21	24 20	25 16	17 23	23 17	15 17	12 18	23 20	.... ....	230 214	444
53 72	4	37 11	353 326	311 318	350 342	312 286	302 290	266 238	294 255	300 284	301 294	265 258	300 285	355 259	1 1	3710 3436	7147
125	4	48	679	629	693	598	592	504	549	584	595	523	585	614	2	7147	.....

TABLE OF BIRTHS, MARRIAGES,
DIVORCES AND DEATHS,
1913.

Table
Births, Marriages, and Deaths for
Rockingham

TOWNS.	Population in 1910.	BIRTHS.								
		Sex.					Parentage.			
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.
Atkinson	440	2	4	..	6	13.63	4	..	1	1
Auburn	637	5	1	..	6	9.41	5	1	..	..
Brentwood	759	16	8	..	*24	31.62	16	1	4	2
Candia	993	8	5	..	13	13.09	7	1	3	1
Chester	818	8	6	..	14	17.11	11	..	..	1
Danville	517	3	4	..	7	13.53	5	..	1	1
Deerfield	917	10	4	..	14	15.26	12	..	1	1
Derry	5,123	60	57	..	117	22.83	59	34	14	10
East Kingston	413	..	4	..	4	9.68	3	..	1	..
Epping	1,649	14	6	..	20	12.12	12	8	..	..
Exeter	4,897	48	49	..	97	19.80	40	40	6	9
Fremont	622	2	7	..	9	14.47	8	..	1	..
Greenland	575	6	4	..	10	17.39	5	3	1	1
Hampstead	796	2	2	..	4	5.02	4	..	..	..
Hampton	1,215	3	8	..	11	9.05	10	1	..	..
Hampton Falls	552	3	1	..	4	7.24	4	..	..	..
Kensington	417	4	3	..	7	16.78	5	..	1	..
Kingston	1,015	5	13	..	18	17.73	14	..	3	1
Londonderry	1,533	6	8	..	14	9.13	7	5	1	1
Newcastle	624	3	5	..	8	12.82	6	..	1	1
Newfields	503	..	..	..	..	..	..	..	..	..
Newington	296	7	..	..	7	23.64	5	1	1	..
Newmarket	3,348	47	46	..	93	27.77	17	56	11	9
Newton	962	5	11	..	16	16.63	11	1	1	1
North Hampton	783	..	..	..	..	..	..	..	..	..
Northwood	1,059	12	7	..	19	17.94	17	..	1	..
Nottingham	607	8	4	..	12	19.76	10	1	1	..
Plaistow	1,173	11	13	..	24	20.46	17	4	1	2
Portsmouth	11,269	140	111	..	251	22.27	130	73	21	20
Raymond	1,203	16	7	..	23	19.11	19	2	1	1
Rye	1,014	3	2	..	5	4.93	5	..	..	..
Salem	2,117	13	12	..	25	11.80	13	7	1	2
Sandown	380	2	6	..	8	21.05	8	..	..	..
Seabrook	1,425	14	15	..	29	20.35	28	..	1	..
South Hampton	279	1	1	..	2	7.16	2	..	..	..
Stratham	602	2	4	..	6	9.96	4	..	2	..
Windham	656	1	5	..	6	9.14	5	..	1	..
Total	52,188	490	443	..	933	17.87	528	239	75	70

* Born at County Farm, 1.

No. 10.*

the year ending December 31, 1913.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
3					3	2	7		9	8	1		20.45
2					2	7	2		9	8		1	14.12
4		2	1		7	20	15		35	25	9	1	13.17
6					6	7	7		14	13		1	14.09
2					2	5	6		11	11			13.44
3					3	2	4		6	6			11.60
7					7	7	5		12	11	1		12.08
36	5	8	3	2	54	37	41		78	63	8	7	15.22
1		1			2	5	6		11	10		1	26.63
4	1		2		7	5	11		16	14	1	1	9.70
25	15	4	5		49	34	52		86	69	12	5	17.56
5		1			6	6	6		12	11		1	19.29
2		2			4	1	2		3	2		1	5.21
6					6	5	11		16	13	1	2	20.08
7					7	12	16		28	25	2	1	23.04
3					3	2	4		6	6			10.86
2					2	1	5		6	5	1		14.38
9					9	9	6		15	15			14.77
9		1	1		11	5	9		14	13	1		9.13
		1			1	3	1		4	4			6.41
			1	1	2	1	1		2	2			3.97
						1	3		4	3	1		13.51
15	11	5	3		34	15	20		35	27	8		10.45
7					7	10	7		17	13	1	3	17.67
	1	1			2								
6					6	8	8		16	13	1	2	15.10
5			1		6	5	4		9	6	1	2	14.82
11		2	2		15	7	6		13	12	1		11.08
144	19	23	14		200	104	102		206	170	30	6	18.28
11		2	1		14	18	6		24	22	2		19.94
4			1		5	6	8		14	12	1	1	13.80
23	4	5	3		35	22	10		32	21	10	1	15.11
2					2	5	4		9	9			23.68
10		2	1		13	8	12		20	20			14.03
1					1	4	3		7	5	2		25.08
3		1			4	1	3		4	3	1		6.64
1					1	3	4		7	3	3	1	10.67
379	56	61	39	3	538	393	417		810	673	99	38	15.52

* Deaths occurring at County Farms and public institutions have been deducted from total number of deaths in making computations of death rate per 1,000.

† Died at County Farm, 25.

Table
Births, Marriages, and Deaths for
Strafford

TOWNS.	Population in 1910.	BIRTHS.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Barrington.....	900	7	6	..	13	14.44	12	....	1	....	....
Dover.....	13,247	148	125	..	273	20.60	102	101	34	25	11
Durham.....	823	1	3	..	4	4.86	3	1	....	....	....
Farmington.....	2,621	19	20	..	39	14.87	29	2	1	4	3
Lee.....	479	5	8	..	13	27.13	10	....	1	2	....
Madbury.....	331	1	3	..	4	12.08	2	2	....	....	....
Middleton.....	291	2	1	..	3	10.30	3	....	....	....	....
Milton.....	1,542	6	16	..	22	14.26	18	2	1	1	....
New Durham.....	523	4	1	..	5	9.56	2	1	2	....	....
Rochester.....	8,868	96	99	..	195	21.98	102	47	30	15	1
Rollinsford.....	1,836	14	17	..	31	16.88	4	17	7	2	1
Somersworth.....	6,704	75	86	..	161	24.01	35	91	18	15	2
Strafford.....	786	5	4	..	9	11.45	8	....	....	1	....
Total.....	38,951	383	389	..	772	19.81	330	264	95	65	18

No. 10.—*Continued.*

the year ending December 31, 1913.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
7					7	10	6		16	15	1		17.77
81	24	18	12		135	121	118		*239	178	54	7	13.58
3		1			4	1	3		4	2	2		4.86
22		4	2		28	21	23		44	40	3	1	16.78
3					3	2	2		4	4			8.35
1					1	1	2		3	3			9.06
						1	7		8	7	1		27.48
11		1			12	17	23		40	34	4	2	25.92
2		1			3	5	4		9	9			17.20
53	6	8	13		80	68	71		139	107	24	8	15.67
5	3	1	1		10	9	9		18	9	7	2	9.80
17	17	6	6		46	39	64		103	84	19		15.36
13		3			16	9	8		17	14	2	1	21.62
218	50	43	34		345	304	340		644	506	117	21	16.53

* Died at public institutions, 39; at County Farm, 20.

Table
Births, Marriages, and Deaths for
Belknap

TOWNS.	Population in 1910.	BIRTHS.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Alton.....	1,348	5	9	..	14	10.38	12	....	1	....	1
Barnstead.....	1,081	2	2	..	4	3.67	3	....	....	....	1
Belmont.....	1,390	3	9	..	12	8.63	6	2	2	2	....
Centre Harbor.....	420	1	3	..	4	9.52	4	....	....	....	....
Gilford.....	744	6	2	..	8	10.75	5	1	1	1	....
Gilmanton.....	968	8	12	..	20	20.66	18	....	1	1	....
Laconia.....	10,183	97	95	1	*193	18.95	68	67	24	29	5
Meredith.....	1,638	14	14	..	28	17.09	19	2	2	2	3
New Hampton.....	821	3	5	..	8	9.74	7	1	....	....	....
Sanbornton.....	850	2	5	..	7	8.23	7	....	....	....	....
Tilton.....	1,866	13	9	..	22	11.78	15	4	2	1	....
Total.....	21,309	154	165	1	320	15.01	164	77	33	36	10

* Born at County Farm, 1.

No. 10.—*Continued.*

the year ending December 31, 1913.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
13	1	.....	.....	14	12	13	.....	25	23	.....	2	18.54
7	7	13	14	.....	27	25	.....	2	24.97
3	1	1	.....	5	10	10	.....	20	14	3	3	14.39
4	4	3	3	.....	6	6	.....	.....	14.28
2	1	.....	.....	3	6	11	.....	17	17	.....	.....	22.84
7	7	10	3	.....	13	12	.....	1	13.43
69	16	21	23	.....	129	95	84	.....	*179	139	35	5	15.83
16	3	2	.....	21	17	19	.....	36	33	2	1	21.97
9	9	7	8	.....	15	11	1	3	18.27
5	1	.....	6	3	6	.....	9	8	1	.....	10.58
14	1	1	.....	16	22	11	.....	33	26	5	2	17.68
149	16	28	28	.....	221	198	182	.....	380	314	47	19	17.83

* Died at public institutions, 11; at County Farm, 7.

Table
Births, Marriages, and Deaths for
Carroll

TOWNS.	Population in 1910.	BIRTHS.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Albany.....	289	1	1	..	2	6.92	1	....	1	....	....
Bartlett.....	1,197	20	12	..	32	26.73	22	3	2	4	1
Brookfield.....	247	.....	1	..	1	4.04	1	....	....	....	....
Chatham.....	209	2	2	..	4	19.12	4	....	....	....	....
Conway.....	3,413	31	34	..	65	19.04	44	8	10	2	1
Eaton.....	380	3	1	..	4	10.52	4	....	....	....	....
Effingham.....	558	8	4	..	12	20.40	12	....	....	....	....
Freedom.....	542	2	.....	..	2	3.69	2	....	....	....	....
Hart's Location.....	85	2	.....	..	2	23.54	1	....	....	1	....
Jackson.....	452	3	3	..	6	13.27	5	1	....	....	....
Madison.....	507	4	6	..	10	19.72	10	....	....	....	....
Moultonborough.....	783	4	7	..	11	14.04	9	....	1	....	1
Ossipee.....	1,354	10	16	..	26	19.20	19	2	2	....	3
Sandwich.....	928	13	4	..	17	18.31	15	....	2	....	....
Tamworth.....	993	12	10	..	22	22.15	22	....	....	....	....
Tuftonborough.....	612	3	4	..	7	11.43	5	1	1	....	....
Wakefield.....	1,543	12	14	..	26	16.85	18	1	3	1	3
Wolfeborough.....	2,224	27	16	..	43	19.33	33	1	4	2	3
Total.....	16,316	157	135	..	292	17.89	227	17	26	10	12

No. 10.—*Continued.*

the year ending December 31, 1913.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
.....	3	3	.....	6	4	2	.....	20.76
12	1	2	.....	15	3	7	.....	10	9	.....	1	8.35
2	1	.....	.....	3	3	.....	.....	3	3	.....	.....	12.14
1	1	1	.....	.....	1	1	.....	.....	4.78
34	4	.....	38	28	28	.....	56	53	2	1	16.40
4	4	2	2	.....	4	4	.....	.....	10.52
6	1	.....	.....	7	6	4	.....	10	10	.....	.....	17.92
7	7	7	3	.....	10	9	.....	1	18.44
.....	2	.....	.....	2	1	1	.....	23.54
2	1	.....	.....	3	.....	2	.....	2	2	.....	.....	4.42
2	2	2	2	.....	4	4	.....	.....	7.88
7	7	10	7	.....	17	16	.....	1	21.71
12	1	13	16	16	.....	*32	26	2	4	19.94
8	8	9	10	.....	19	17	2	.....	20.47
10	10	10	13	.....	23	19	1	3	23.16
3	1	.....	.....	.....	4	8	4	.....	12	11	1	.....	19.60
7	1	1	.....	.....	9	15	12	.....	27	24	3	.....	17.49
10	2	.....	.....	12	27	18	.....	45	38	3	4	20.23
127	2	7	6	1	143	152	131	.....	283	251	17	15	17.34

* Died at County Farm, 5.

Table
Births, Marriages, and Deaths for
Merrimack

TOWNS.	Population in 1910.	BIRTHS.									
		Sex.				Parentage.					
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and for- eign father.	American father and for- eign mother.	Not stated.
Allenstown.....	1,457	24	20	..	44	30.19	10	21	9	4	...
Andover.....	1,201	9	10	..	19	15.82	17	..	1	..	1
Boscawen.....	1,240	7	7	..	14	11.29	11	2	..	1	..
Bow.....	676	3	3	..	6	8.87	3	1	..	2	..
Bradford.....	695	3	5	..	8	11.51	7	..	1	..	..
Canterbury.....	680	1	3	..	4	5.88	3	1	..	..	..
Chichester.....	606	1	5	..	6	9.90	4	1	..	1	..
Concord.....	21,497	234	218	..	452	21.02	230	127	53	36	6
Danbury.....	502	5	6	..	11	18.58	8	..	1	1	1
Dunbarton.....	513	4	3	..	7	13.64	4	3	..	..	..
Epsom.....	725	8	4	..	12	16.54	8	2	2	..	..
Franklin.....	6,132	89	85	..	174	28.37	65	66	20	18	5
Henniker.....	1,395	11	12	..	23	16.48	19	3	1	..	..
Hill.....	556	3	5	..	8	14.38	4	..	2	1	1
Hooksett.....	1,528	10	14	..	24	15.70	13	7	3	1	..
Hopkinton.....	1,578	15	12	..	27	17.17	21	3	2	1	..
Loudon.....	838	6	3	..	9	10.73	6	..	..	2	1
Newbury.....	402	2	5	..	7	17.41	6	1	..	..	..
New London.....	805	9	4	..	13	16.14	10	2	..	..	1
Northfield.....	1,474	10	10	..	20	13.56	18	2	..	..	..
Pembroke.....	3,062	31	25	..	56	18.28	10	30	8	8	..
Pittsfield.....	2,222	16	24	..	40	18.00	21	6	6	6	1
Salisbury.....	478	4	4	..	8	16.72	7	..	1	..	..
Sutton.....	698	4	4	..	8	11.46	8	..	..	..	..
Warner.....	1,226	9	9	..	18	14.68	17	..	1	..	..
Webster.....	445	..	2	..	2	4.49	2	..	..	..	..
Wilnot.....	614	3	4	..	7	11.40	6	1	..	..	..
Total.....	53,335	521	506	..	1,027	19.25	538	279	111	82	17

No. 10.—Continued.

the year ending December 31, 1913.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
6	8	1	3	....	18	10	17	....	27	17	9	1	18.53
8	....	2	....	....	10	8	6	....	14	14	....	....	11.65
8	....	....	....	....	8	26	16	....	*42	33	6	3	15.32
....	....	....	....	....	....	7	12	....	19	18	1	....	28.10
3	....	1	....	....	4	4	5	....	9	9	....	....	12.94
3	....	....	....	....	3	5	7	....	12	10	2	....	17.64
3	....	....	....	....	3	3	6	....	9	9	....	....	14.85
138	27	17	15	2	199	275	225	....	†500	384	100	16	12.00
4	1	....	....	....	5	7	3	....	10	9	....	1	19.92
....	....	....	....	....	....	4	2	....	6	6	....	....	11.69
7	....	1	....	....	8	4	7	....	11	9	2	....	15.17
32	10	7	10	....	59	48	46	....	†94	75	15	4	13.20
7	....	....	1	....	8	9	10	....	19	18	1	....	13.62
1	....	....	....	....	1	3	2	....	5	4	1	....	8.99
7	4	....	1	....	12	12	15	....	27	23	3	1	17.66
6	....	2	3	....	11	17	21	....	38	30	1	7	24.08
3	....	1	1	....	5	11	7	....	18	17	....	1	21.46
4	....	....	....	....	4	2	1	....	3	3	....	....	7.46
8	....	2	....	....	10	4	8	....	12	11	1	....	14.90
7	....	1	1	....	9	12	10	....	22	14	2	6	14.92
5	3	3	3	....	14	29	30	....	§59	42	16	1	14.68
8	....	2	1	....	11	22	21	....	43	37	5	1	19.35
3	....	....	....	....	3	4	3	....	7	7	....	....	14.64
4	....	1	....	....	5	5	4	....	9	8	1	....	12.89
7	....	....	....	....	7	8	14	....	22	21	1	....	17.94
....	....	....	....	....	....	5	3	....	8	7	1	....	17.96
4	....	....	....	....	4	9	4	....	13	11	....	2	21.17
286	53	41	39	2	421	553	505	....	1,058	846	168	44	19.83

* Died at County Farm, 23.

† Died at public institutions, 242.

‡ Died at public institutions, 13.

§ Died at public institutions, 14.

Table
Births, Marriages, and Deaths for
Hillsborough

TOWNS.	Population in 1910.	BIRTHS.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Amherst.....	1,060	8	2	..	10	9.43	6	1	..	3	..
Antrim.....	1,235	18	9	..	27	21.86	19	1	3	4	..
Bedford.....	1,110	5	6	..	11	9.90	4	3	2	2	..
Bennington.....	690	2	3	..	5	7.24	4	1	..	..	..
Brookline.....	501	7	2	..	9	17.96	3	3	2	1	..
Deering.....	353	2	2	..	4	11.33	3	1	..	..	..
Francestown.....	602	8	2	..	10	16.61	10	..	..	..	..
Goffstown.....	2,579	21	18	..	*39	15.12	17	4	1	4	13
Greenfield.....	574	9	..	..	9	15.67	9	..	..	..	..
Greenville.....	1,374	19	16	..	35	25.47	7	13	8	6	1
Hancock.....	642	4	9	..	13	20.24	9	1	1	2	..
Hillsborough.....	2,168	14	25	..	39	17.98	28	4	5	1	1
Hollis.....	935	8	3	..	11	11.76	8	..	1	1	1
Hudson.....	1,344	18	10	..	28	20.82	16	3	3	6	..
Litchfield.....	255	2	2	..	4	15.68	4	..	..	..	..
Lyndeborough.....	660	5	5	..	10	15.15	10	..	..	..	..
Manchester.....	70,063	1,047	1,041	2	2,090	29.83	426	1,237	222	178	27
Mason.....	325	4	4	..	8	24.61	2	1	1	3	1
Merrimack.....	1,039	5	8	..	13	12.51	6	4	2	..	1
Milford.....	3,939	49	40	..	89	22.59	36	37	11	5	..
Mont Vernon.....	413	2	2	..	4	9.68	3	1	..	..	..
Nashua.....	26,005	314	304	..	618	23.76	171	336	63	39	9
New Boston.....	982	6	7	..	13	13.23	9	..	3	1	..
New Ipswich.....	927	8	8	..	16	17.25	7	8	..	1	..
Pelham.....	826	13	7	..	20	24.21	13	2	2	2	1
Peterborough.....	2,277	31	27	..	58	25.47	42	4	4	8	..
Sharon.....	71	..	2	..	2	28.16	..	2	..	..	..
Temple.....	284	7	1	..	8	28.16	8	..	..	..	..
Weare.....	1,325	10	8	..	18	13.58	15	1	..	1	1
Wilton.....	1,490	14	14	..	28	18.79	16	5	3	4	..
Windsor.....	24	..	..	..	..	..	..	..	..	..	..
Total.....	126,072	1,660	1,587	2	3,249	25.77	911	1,673	337	272	56

* Died at County Farm, 15.

No. 10.—Continued.

the year ending December 31, 1913.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
4					4	10	6		16	13	2	1	15.09
9					9	9	11		20	16	3	1	16.19
5		1	1		7	7	12		19	13	6		17.11
5					5	5	5		10	8	2		14.49
4		1	1		6	5	4		9	8	1		17.96
4					4	4	7		11	11			31.16
3					3	5	2		7	7			12.62
9	1	1			11	90	66		*156	92	58	6	11.24
2	1				3	2	3		5	4	1		8.71
6		2			8	11	10		21	13	7	1	15.28
6					6	4	7		11	9	1	1	17.13
12	1	2			15	15	33		48	43	4	1	22.14
6		1			7	7	10		17	17			18.18
6	1	4			11	10	9		19	16	3		14.13
5					5	2	3		5	5			19.60
2					2	1	7		8	7	1		12.12
230	322	98	96	1	747	662	646		†1,308	867	433	8	15.54
7		1			8	4	3		7	7			21.53
8		1			9	8	9		17	17			16.36
25	20	4			49	28	30		58	46	11	1	14.72
2		1	1		4	4	6		10	8	2		24.27
179	141	41	55	1	417	231	201		†432	309	111	12	13.80
6			1		7	7	8		15	13	2		15.27
3	4		2		9	7	4		11	10	1		11.86
5					5	5	6		11	10	1		13.31
11		1	1		13	16	15		31	26	4	1	13.61
1					1	3	3		6	6			21.12
6		2			8	13	5		18	18			13.58
11	1	1	3		16	9	15		24	22	1	1	16.10
582	492	162	161	2	1,399	1,184	1,146	....	2,330	1,641	655	34	18.48

* Died at County Farm, 127.

† Died at public institutions, 221.

‡ Died at public institutions, 73.

Table

Births, Marriages, and Deaths for

Cheshire

TOWNS.	Population in 1910.	BIRTHS.								
		Sex.					Parentage.			
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.
Alstead.....	711	8	5	..	13	18.28	8	3	1	1
Chesterfield.....	770	7	3	..	10	12.98	8	..	1	1
Dublin.....	571	3	4	..	7	12.25	3	3	..	1
Fitzwilliam.....	1,148	9	18	..	27	23.51	9	14	3	1
Gilsum.....	470	..	1	..	1	2.12	1	..	..	..
Harrisville.....	623	7	6	..	13	20.86	4	6	3	..
Hinsdale.....	1,673	14	27	..	41	24.50	27	9	3	2
Jaffrey.....	1,895	20	25	..	45	23.74	11	22	5	5
Keene.....	10,068	125	128	..	253	25.12	156	45	25	19
Marlborough.....	1,478	27	12	..	39	26.38	16	14	6	3
Marlow.....	425	6	3	..	9	21.17	7	..	1	1
Nelson.....	231	2	1	..	3	12.98	3	..	..	..
Richmond.....	393	3	1	..	4	10.17	3	1	..	..
Rindge.....	706	5	2	..	7	9.91	4	1	..	1
Roxbury.....	66	1	1	..	2	30.30	2	..	..	..
Stoddard.....	257	..	1	..	1	3.89	..	..	..	1
Sullivan.....	266	4	1	..	5	18.79	2	2	..	1
Surry.....	213	3	3	..	6	28.16	5	1	..	..
Swanzey.....	1,656	10	13	..	23	13.88	18	3	1	1
Troy.....	1,331	14	22	..	36	27.04	12	18	4	2
Walpole.....	2,668	27	36	..	63	21.63	28	27	2	4
Westmoreland.....	758	6	5	..	*11	14.50	9	..	1	..
Winchester.....	2,282	27	33	..	60	26.29	22	30	4	4
Total.....	30,659	328	351	..	679	22.14	358	199	60	45
										17

* Born at County Farm, 1.

No. 10.—Continued.

the year ending December 31, 1913.

County.

MARRIAGES.						DEATHS.							
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Sex.				Nativity.			
						Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
2			1		3	7	5		12	10	1	1	16.87
3		1			4	11	6		17	15	1	1	22.07
2					2	1	4		5	4	1		8.75
6	2	3			11	2	6		8	6	2		7.05
1					1	4	3		7	6	1		14.89
1					1	3	8		11	11			17.65
14	3	1	3		21	16	10		26	19	5	2	15.54
13	5	3	3		24	17	11		28	25	3		14.77
87	12	13	6		118	103	89		*192	146	38	8	14.40
11		1			12	11	10		21	18	3		14.20
3					3	3	6		9	7		2	21.17
2					2	2	3		5	3		2	21.64
3		1	1		5	1	1		2	2			5.08
2	1				3	7	3		10	10			14.16
2					2	2			2	2			7.78
1					1		1		1	1			4.69
11	1	1			13	11	11		22	19	2	1	13.28
9	5	3			17	10	11		21	16	4	1	15.77
18	1	1	1		21	14	19		33	23	7	3	12.36
4					4	22	6		†28	24	4		18.46
16	6	2	1		25	24	20		44	36	5	3	19.28
211	36	30	16		293	271	233		504	403	77	24	16.43

* Died at public institutions, 47.

† Died at County Farm, 14.

Table
Births, Marriages, and Deaths for
Sullivan

TOWNS.	Population in 1910.	BIRTHS.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Acworth.....	536	3	4	..	7	13.05	5	1	1	....	....
Charlestown.....	1,496	14	14	..	28	18.71	17	8	....	2	1
Claremont.....	7,529	105	90	..	195	22.89	75	79	24	16	1
Cornish.....	1,005	3	7	..	10	9.95	9	....	....	1	....
Croydon.....	324	.....	1	..	1	3.08	1	....	....	....	....
Goshen.....	329	3	3	..	6	18.23	5	....	....	....	1
Grantham.....	286	2	1	..	3	10.48	3	....	....	....	....
Langdon.....	340	1	5	..	6	17.64	4	2	....	....	....
Lempster.....	383	3	6	..	9	23.49	8	....	....	1	....
Newport.....	3,765	50	53	..	103	27.35	61	27	8	4	3
Plainfield.....	987	9	10	..	19	19.25	17	....	....	1	1
Springfield.....	422	4	6	..	10	23.69	8	1	....	1	....
Sunapee.....	1,071	7	6	..	13	12.13	8	....	4	1	....
Unity.....	504	6	6	..	12	23.80	11	....	....	1	....
Washington.....	360	3	2	..	5	13.88	5	....	....	....	....
Total.....	19,337	213	214	..	427	22.08	237	118	37	28	7

No. 10.—*Continued.*

the year ending December 31, 1913.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
5	.....	1	.....	.....	6	4	5	....	9	7	2	....	16.79
10	1	.....	.....	.....	11	19	15	....	34	29	4	1	22.72
64	38	6	9	....	117	62	49	....	111	80	28	3	14.74
1	.....	.....	.....	.....	1	7	7	....	14	12	2	....	13.93
1	.....	.....	.....	.....	1	3	1	....	4	4	.....	.....	12.34
.....	.....	.....	.....	.....	.....	3	3	....	6	5	1	....	18.23
4	.....	.....	.....	.....	4	5	2	....	7	6	.....	1	24.47
2	2	.....	.....	.....	4	4	2	....	6	4	2	....	17.64
.....	.....	.....	.....	.....	.....	5	3	....	8	8	.....	.....	20.88
27	16	4	5	....	52	37	27	....	64	52	6	6	16.99
2	.....	.....	.....	.....	2	16	5	....	21	20	.....	1	21.27
2	.....	1	.....	.....	3	1	3	....	4	4	.....	.....	9.47
7	2	3	3	....	15	6	7	....	13	11	1	1	12.13
6	.....	1	.....	.....	7	4	3	....	*7	4	1	2	3.96
6	.....	.....	.....	.....	6	3	1	....	4	4	.....	.....	11.11
137	59	16	17	....	229	179	133	....	312	250	47	15	16.13

* Died at County Farm, 5.

Table
Births, Marriages, and Deaths for
Grafton

TOWNS.	Population in 1910.	BIRTHS.								
		Sex.					Parentage.			
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.
Alexandria.....	571	2	1	..	3	5.25	..	1	1	1
Ashland.....	1,412	11	24	..	35	24.78	16	11	3	5
Bath.....	978	6	9	..	15	15.33	11	..	4	..
Benton.....	219	1	1	..	2	9.13	2	..	..	..
Bethlehem.....	1,201	12	9	..	21	17.48	12	..	4	4
Bridgewater.....	187	1	4	..	5	26.73	4	1	..	..
Bristol.....	1,478	9	6	..	15	10.14	9	1	2	2
Campton.....	845	8	1	..	9	10.65	7	..	1	1
Canaan.....	1,408	8	12	..	20	14.20	15	..	2	2
Dorchester.....	241	1	2	..	3	12.44	2	1	..	..
Easton.....	226	1	..	..	1	4.47	..	..	1	..
Ellsworth.....	46	..	1	..	1	21.73	1	..	..	..
Enfield.....	1,448	11	7	..	18	12.43	14	2	1	1
Franconia.....	504	1	3	..	4	7.93	3	1	..	..
Grafton.....	641	2	1	..	3	4.68	1	..	2	..
Groton.....	319	2	1	..	3	9.40	2	1	..	..
Hanover.....	2,075	25	28	..	53	25.54	35	4	6	5
Haverhill.....	3,498	37	32	..	*69	19.72	51	4	9	5
Hebron.....	213	1	..	..	1	4.69	1	..	..	..
Holderness.....	652	2	4	..	6	9.20	3	..	1	2
Landaff.....	526	3	4	..	7	13.30	5	1	..	1
Lebanon.....	5,718	62	58	..	120	20.98	66	28	13	12
Lincoln.....	1,278	16	19	..	35	27.38	7	21	4	3
Lisbon.....	2,460	15	12	..	27	10.97	21	4	1	1
Littleton.....	4,069	39	39	..	78	19.16	43	9	15	10
Livermore.....	64	..	..	..	..	..	..	..	..	..
Lyman.....	374	5	2	..	7	18.71	5	1	1	..
Lyme.....	1,007	13	5	..	18	17.87	16	..	..	2
Monroe.....	429	3	3	..	6	13.98	4	..	2	..
Orange.....	176	3	1	..	4	22.72	4	..	..	..
Orford.....	799	6	3	..	9	11.26	7	1	1	..
Piermont.....	592	4	5	..	9	15.20	9	..	..	..
Plymouth.....	2,200	28	19	..	47	21.36	34	1	4	4
Rumney.....	850	7	6	..	13	15.29	11	..	1	1
Thornton.....	553	7	..	..	7	12.65	5	..	1	1
Warren.....	701	9	6	..	15	21.39	10	1	1	1
Waterville.....	16	..	..	..	..	..	..	..	..	..
Wentworth.....	595	7	5	..	12	20.16	7	1	3	1
Woodstock.....	1,083	11	16	..	27	24.93	7	9	7	4
Total.....	41,652	379	349	..	728	17.47	450	104	89	68

* Born at County Farm, 1.

No. 10.—Continued.

the year ending December 31, 1913.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
3					3	6	3		9	9			15.76
8	1	3	3		15	14	19		33	27	5	1	23.37
5			1		6	9	8		17	15		2	17.38
1			1		2	2	3		5	3	2		22.83
11	1	2	3		17	8	4		12	10	2		9.99
2					2	1	4		5	4		1	26.73
10			3		13	18	17		35	33		2	23.68
8			1		9	4	8		12	9	2	1	14.20
13			1		14	8	10		18	12	5	1	12.78
2					2	2	2		4	2	1	1	16.56
1					1		2		2	2			8.94
1					1	1			1	1			21.73
12	1		2		15	10	10		20	14	3	3	13.81
2		1			3	5	6		11	8	3		21.82
4		1	1		6	4	4		8	6	2		12.48
							3		3	3			9.40
17	1	3	2		23	34	39		*73	49	12	12	14.93
32		4	3		39	32	29		†61	43	6	12	11.72
4			1		5	7	3		10	9	1		15.33
4		1			5	9	5		14	13		1	26.60
57	7	8	6		78	36	39		75	66	9		13.11
1	1	1	3		6	8	3		11	7	3	1	8.60
20		2	3		25	21	19		40	33	5	2	16.26
51	4	14	7		76	33	34		67	51	15	1	16.46
							1		1		1		15.62
4		1			5	3	3		6	3	2	1	16.04
3			1		4	10	11		21	20		1	20.85
2					2	2	2		4	3	1		9.32
1					1	2	3		5	5			28.40
3					3	6	5		11	10		1	13.76
7					7	1	2		3	3			5.06
18	1	2	4		25	19	21		40	34	2	4	18.18
8					8	2	10		12	12			14.11
1		1			2	6			6	4	1	1	10.84
4					4	4	5		9	6		3	12.83
1					1								
4					4	9	4		13	13			21.84
2	2				4	8	4		12	10		2	11.08
327	19	44	46	....	436	344	345	....	689	552	83	54	16.54

* Died at public institutions, 42.

† Died at County Farm, 11; at public institutions, 9.

Table
Births, Marriages, and Deaths for
Coös

TOWNS.	Population in 1910.	BIRTHS.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Berlin.....	11,780	251	218	1	470	39.89	73	281	84	29	3
Carroll.....	569	5	6	..	11	19.33	6	4	1	..	..
Clarksville.....	271	1	2	..	3	11.07	3	..	..	..	..
Colebrook.....	1,905	24	16	..	40	20.99	31	3	3	2	1
Columbia.....	619	6	4	..	10	16.15	5	1	1	1	2
Dalton.....	475	7	3	..	10	21.05	7	..	1	2	..
Dummer.....	292	5	..	..	5	17.12	5	..	..	..	..
Errol.....	211	1	2	..	3	14.21	1	..	1	1	..
Gorham.....	2,155	33	26	..	59	27.37	18	23	11	6	1
Jefferson.....	1,061	4	4	..	8	7.54	7	..	..	1	..
Lancaster.....	3,054	23	17	..	40	13.09	19	7	8	3	3
Milan.....	924	8	6	..	14	15.14	10	3	1	..	..
Millsfield.....	12	..	..	..	..	..	..	..	..	..	..
Northumberland.....	2,184	27	28	..	55	25.18	21	15	9	10	..
Pittsburg.....	624	3	1	..	4	6.41	..	..	4	..	..
Randolph.....	137	1	1	..	2	14.58	2	..	..	..	..
Shelburne.....	305	1	1	..	2	6.55	1	..	..	1	..
Stark.....	448	3	7	..	10	22.32	7	..	1	1	1
Stewartstown.....	1,128	7	4	..	11	9.75	4	3	2	1	1
Stratford.....	844	11	5	..	16	18.95	9	1	3	1	2
Wentworth Location....	51	..	..	..	..	..	..	..	..	..	..
Whitefield.....	1,635	19	17	..	36	22.01	23	3	6	4	..
Total.....	*30,753	440	368	1	809	26.30	252	344	136	63	14

* Including unincorporated townships and grants.

No. 10.—Continued.

the year ending December 31, 1913.

County.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
28	27	17	32	1	105	94	88	....	*182	116	55	11	14.34
1	1	.....	1	....	3	5	4	....	9	5	2	2	15.82
3	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....
18	3	1	2	....	24	17	18	....	35	30	4	1	18.37
4	.....	1	1	....	6	3	4	....	7	5	2	....	11.30
4	.....	.....	1	....	5	1	3	....	4	2	1	1	8.42
.....	.....	.....	.....	.....	.....	2	.....	.....	2	2	.....	.....	6.84
.....	2	.....	.....	.....	2	1	3	....	4	3	.....	1	18.95
11	8	1	4	....	24	17	22	....	39	26	5	8	18.09
2	.....	.....	.....	.....	2	7	5	....	12	10	1	1	11.31
19	1	2	4	....	26	29	21	....	50	29	14	7	16.37
3	.....	.....	.....	.....	3	4	6	....	10	8	1	1	10.82
.....	.....	.....	.....	.....	.....	2	.....	.....	2	1	.....	1	166.66
9	3	5	4	1	22	16	14	....	30	17	11	2	13.73
2	.....	.....	.....	.....	2	1	.....	.....	1	.....	.....	1	1.60
1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
3	.....	1	1	....	5	2	1	....	3	2	.....	1	9.83
4	.....	1	.....	.....	5	4	6	....	10	9	.....	1	22.32
5	1	.....	.....	2	8	15	9	....	†24	11	3	10	11.52
5	1	1	.....	.....	7	4	8	....	12	10	1	1	14.21
.....
11	.....	1	2	....	14	13	16	....	29	19	7	3	17.73
133	47	31	52	4	267	237	228	....	465	305	107	53	15.12

* Died at public institutions, 13.

† Died at County Farm, 11.

Table
Births, Marriages, and Deaths for
Recapitulation

COUNTIES.	Population in 1910.	BIRTHS.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Rockingham.....	52,188	490	443	..	933	17.87	528	239	75	70	21
Strafford.....	38,951	383	389	..	772	19.81	330	264	95	65	18
Belknap.....	21,309	154	165	1	320	15.01	164	77	33	36	10
Carroll.....	16,316	157	135	..	292	17.89	227	17	26	10	12
Merrimack.....	53,335	521	506	..	1,027	19.25	538	279	111	82	17
Hillsborough.....	126,072	1,660	1,587	2	3,249	25.77	911	1673	337	272	56
Cheshire.....	30,659	328	351	..	679	22.14	358	199	60	45	17
Sullivan.....	19,337	213	214	..	427	22.08	237	118	37	28	7
Grafton.....	41,652	379	349	..	728	17.47	450	104	89	68	17
Coös.....	30,753	440	368	1	809	26.30	252	344	136	63	14
Total.....	430,572	4,725	4,507	4	9,236	21.45	3995	3314	999	739	189

No. 10.—*Concluded.*

the year ending December 31, 1913.

by Counties.

MARRIAGES.						DEATHS.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
379	56	61	39	3	538	393	417	....	810	673	99	38	15.52
218	50	43	34	....	345	304	340	....	644	506	117	21	16.53
149	16	28	28	....	221	198	182	....	380	314	47	19	17.83
127	2	7	6	1	143	152	131	....	283	251	17	15	17.34
286	53	41	39	2	421	553	505	....	1,058	846	168	44	19.83
582	492	162	161	2	1,399	1,184	1,146	....	2,330	641	655	34	18.48
211	36	30	16	....	293	271	233	....	504	403	77	24	16.43
137	59	16	17	....	229	179	133	....	312	250	47	15	16.13
327	19	44	46	....	436	344	345	....	689	552	83	54	16.54
133	47	31	52	4	267	237	228	....	465	305	107	53	15.12
2,549	830	463	438	12	4,292	3,815	3,660	....	7,475	5,741	1,417	317	17.36

Table
Births by Sex and

COUNTIES.		January.	February.	March.	April.	May.
Rockingham.....	Males.....	48	37	43	46	39
	Females.....	32	20	30	42	41
	Not stated.....					
Strafford.....	Males.....	30	25	42	33	33
	Females.....	36	27	46	28	38
	Not stated.....					
Belknap.....	Males.....	9	13	13	16	14
	Females.....	7	9	19	14	16
	Not stated.....				1	
Carroll.....	Males.....	14	14	12	12	12
	Females.....	9	16	9	17	13
	Not stated.....					
Merrimack.....	Males.....	29	46	50	42	46
	Females.....	42	42	50	45	43
	Not stated.....					
Hillsborough.....	Males.....	139	115	126	144	144
	Females.....	137	117	141	138	147
	Not stated.....					
Cheshire.....	Males.....	22	29	30	30	24
	Females.....	25	34	29	24	32
	Not stated.....					
Sullivan.....	Males.....	20	9	26	11	19
	Females.....	15	26	18	17	22
	Not stated.....					
Grafton.....	Males.....	31	37	28	32	29
	Females.....	36	25	20	37	35
	Not stated.....					
Coös.....	Males.....	41	32	32	32	38
	Females.....	24	33	34	32	25
	Not stated.....					
Total.....	Males.....	383	357	402	398	398
	Females.....	363	349	396	394	412
	Not stated.....				1	
Grand total.....		746	706	798	793	810

No. 11.

Month, by Counties, 1913.

June.	July.	August.	September	October.	November.	December.	Unknown.	Total.	Grand Total.
36 40	41 40	49 32	47 41	34 35	37 49	33 41	.....	490 443	933
29 38	42 30	28 31	26 36	52 24	15 17	28 38	.....	383 389	772
12 11	18 13	12 13	12 7	12 23	13 18	10 15	.....	154 165 1	320
15 10	13 18	17 9	12 9	12 11	11 7	13 7	.....	157 135	292
41 48	46 41	43 35	50 49	48 38	37 34	43 39	.....	521 506	1,027
141 125	159 146	149 147 1	123 140 1	143 132	134 115	143 102	.....	1,660 1,587 2	3,249
26 24	30 38	28 22	25 30	28 25	28 38	28 30	.....	328 351	679
25 14	13 14	15 20	11 17	25 13	19 19	20 19	.....	213 214	427
24 24	35 26	35 34	25 36	37 28	30 26	36 22	.....	379 349	728
28 27	42 49 1	43 25	33 29	32 33	43 21	44 36	.....	440 368 1	809
377 361	439 415 1	419 368 1	364 394 1	423 362	367 344	398 349	.....	4,725 4,507 4	9,236
738	855	788	759	785	711	747	.....	9,236	9,236

Table

Births showing age of mother,

NUMBER OF CHILD.	Under 15.			15 to 20.			20 to 25.			25 to 30.			30 to 35.		
	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.
1st.....	5			440	134	6	670	453	....	308	190	1	139	80	1
2d.....				103	26	....	493	318	2	333	250	3	169	87	....
3d.....				17	1	....	260	132	1	255	248	....	172	111	1
4th.....				2		....	104	70	....	204	181	....	121	120	....
5th.....							28	13	....	132	133	....	91	102	....
6th.....							9	10	....	52	92	1	81	115	1
7th.....							4		....	33	40	....	54	81	1
8th.....										14	16	....	29	50	....
9th.....										4	7	....	16	33	....
10th.....											2	....	9	18	....
11th.....										2	2	....	1	9	....
12th.....													4	3	....
13th.....											1	....		1	....
14th.....													1	2	....
15th.....															....
16th.....															....
17th.....															....
18th.....															....
19th.....															....
20th.....															....
21st.....															....
Not stated				3			5	7	....	9	10	1	4	5	2
Total...	5			565	161	6	1,573	1,003	3	1,346	1,172	6	891	817	6

No. 12.

Number of Child, by Nationality, 1913.

35 to 40.			40 to 45.			45 to 50.			Over 50.			Not stated.			Total.			Grand total.
American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	
41	33	....	6	7	1	2	2	....	....	....	....	13	4	4	1,624	903	13	2,540
58	31	....	15	8	....	2	....	....	....	....	....	9	4	....	1,182	724	5	1,911
80	48	....	10	7	....	1	2	....	....	....	....	6	3	....	801	552	2	1,355
57	59	....	16	10	....	2	....	....	....	....	....	2	4	1	508	444	1	953
65	74	....	18	18	....	....	....	....	....	....	....	6	4	1	340	344	1	685
55	55	....	15	12	....	4	1	....	....	....	....	4	1	....	220	286	2	508
30	53	....	12	13	....	4	2	....	....	....	....	2	3	....	139	192	1	332
29	65	....	11	16	....	....	5	....	....	....	....	2	....	....	85	152	....	237
35	54	1	11	27	....	3	1	....	....	....	....	....	....	....	69	122	1	192
19	52	....	10	25	....	2	2	....	....	....	....	1	1	....	41	100	....	141
15	40	....	8	22	....	....	1	....	....	....	....	....	....	....	26	74	....	100
3	24	....	8	24	....	1	3	....	....	....	....	....	....	....	16	54	....	70
4	16	....	3	22	....	1	3	....	....	....	....	....	1	....	8	44	....	52
3	9	....	6	11	....	1	1	....	....	....	....	....	....	....	11	23	....	34
1	3	....	4	7	....	....	2	....	....	....	....	....	....	....	5	12	....	17
....	5	....	1	4	....	....	1	....	....	....	....	....	....	....	1	10	....	11
....	....	....	....	4	....	....	....	....	....	....	....	....	....	....	....	4	....	4
....	....	....	2	2	....	....	1	....	....	....	....	....	....	....	2	3	....	5
....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	1	1	....	2
....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	1
....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	1
4	4	....	2	4	....	....	1	....	....	....	....	13	6	5	40	37	8	85
499	625	1	159	246	1	23	28	....	....	....	....	58	31	11	5,119	4,083	34	9,236

Table No. 13.—1913.

AGES OF GROOMS.	AGES OF BRIDES.														No. of grooms.	
	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	Over 80.		Not stated.
Under 20.....	*146	58	3	3	2	1	..	..	..	..	..	..	..	..	..	213
20 to 25.....	†671	852	141	14	1	1	..	..	..	..	..	..	..	..	1	1,681
25 to 30.....	‡197	465	289	64	25	6	1	..	..	..	..	..	..	..	..	1,047
30 to 35.....	§52	141	135	94	33	14	4	..	..	..	1	..	..	..	..	474
35 to 40.....	31	48	75	88	63	22	4	2	1	..	..	..	..	..	..	334
40 to 45.....	8	23	26	32	35	35	13	7	1	1	..	..	..	..	..	181
45 to 50.....	7	3	14	18	24	22	24	6	1	..	1	..	..	..	..	120
50 to 55.....	2	3	8	12	18	20	15	18	2	..	2	..	1	..	..	101
55 to 60.....	..	2	3	3	5	5	10	6	6	2	1	..	..	..	..	43
60 to 65.....	1	1	1	2	4	2	4	6	4	10	3	2	..	..	..	40
65 to 70.....	..	..	2	2	6	1	6	3	4	4	3	1	..	..	..	32
70 to 75.....	..	1	2	..	1	2	3	..	4	1	1	1	..	..	..	16
75 to 80.....	..	..	..	1	..	..	..	..	1	1	1	1	..	..	..	5
Over 80.....	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	2
Not stated.....	..	..	..	..	..	..	1	..	..	..	..	..	..	..	2	3
No. of brides.....	1,115	1,597	699	333	217	131	85	48	24	20	14	5	1	..	3	4,292

* One bride twelve years of age; four, fifteen.

† One bride fourteen years of age; four, fifteen.

‡ Three brides, fifteen.

§ One bride, fifteen.

Table No. 14.
Still Births, by Sex, Parentage, and Months, by Counties, 1913.

COUNTIES.	SEX.		PARENTAGE.					MONTHS.													
	Male.	Female.	Not stated.	Both American.	Both foreign.	American mother and for- eign father.	American father and for- eign mother.	Total.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Not stated.
Rockingham.....	30	17	2	20	18	7	4	49	6	2	5	5	1	6	3	5	6	2	3	5	5
Strafford.....	21	14	2	15	7	8	4	37	5	3	1	1	3	2	2	2	4	2	5	1	1
Belknap.....	7	9	...	6	2	4	4	16	1	1	1	1	1	1	1	...	2	...	2	2	...
Carroll.....	8	7	...	12	...	1	...	15	3	1	1	1	1	1	1	...	3	...	1	1	...
Merrimack.....	22	16	1	14	13	5	5	2	39	4	5	1	2	3	4	...	2	7	4	2	...
Hillsborough.....	112	68	4	49	94	20	14	7	184	16	14	13	14	21	13	14	12	19	17	11	20
Cheshire.....	15	10	...	15	5	3	2	25	3	2	...	3	3	3	4	2	2	2	2	1	2
Sullivan.....	13	11	...	14	5	2	3	24	3	...	1	3	...	1	3	3	1	4	...	1	...
Grafton.....	19	19	2	29	4	...	4	3	40	2	2	1	3	2	1	6	4	6	2	6	5
Cooks.....	19	13	1	13	14	4	2	33	2	6	2	3	1	2	5	1	4	3	1	...	...
Total.....	266	184	12	187	162	54	42	17	462	45	36	28	40	36	38	40	32	54	33	33	47

BIRTHS.

DIVORCES.

Table No. 15.

Divorces Decreed by the Supreme Court of New Hampshire, in the year 1913, as returned by the Clerks of the Several Counties.

COUNTIES.	CAUSES OF DIVORCE.																LIBELLANTS.							
	Willing absence and extreme cruelty.	Abandonment and refusal to cohabit.	Abandonment and habitual drunkenness.	Non-support.	Conviction of crime and imprisonment.	Abandonment.	Abandonment and adultery.	Adultery and habitual drunkenness.	Adultery.	Desertion.	Extreme cruelty.	Extreme cruelty and treatment injurious to health.	Extreme cruelty and habitual drunkenness.	Extreme cruelty and adultery.	Habitual drunkenness.	Impotency.	Willing absence and refusal to cohabit.	Treatment injurious to health.	Nullity.	Treatment injurious to health and to reason.	Willing absence three years.	Males.	Females.	Total of each county.
Rockingham.....	..	22	..	..	..	26	..	..	8	..	12	..	..	..	4	..	..	8	..	..	2	12	48	60
Strafford.....	..	6	..	..	..	1	..	..	8	..	10	..	..	..	2	..	..	..	..	..	3	14	30	44
Belknap.....	..	3	..	..	..	3	..	..	8	..	10	..	..	..	3	..	..	6	..	..	..	8	21	29
Carroll.....	..	1	..	..	..	16	..	..	14	..	18	..	..	..	10	..	..	2	..	..	..	8	18	26
Merrimack.....	1	..	..	..	..	50	..	..	24	..	49	..	..	1	10	..	..	6	..	..	12	27	54	81
Hillsborough.....	16	..	..	7	..	16	..	..	..	1	..	..	10	1	1	3	16	51	113
Cheshire.....	..	6	..	..	..	9	..	..	6	..	13	..	..	..	1	..	..	4	1	1	1	15	31	46
Sullivan.....	34	..	..	12	4	17	..	..	1	1	..	..	2	1	..	1	19	20	39
Grafton.....	1	20	..	..	4	..	13	..	..	..	3	..	..	8	..	2	2	23	61	84
Cooks.....	4	..	..	..	..	..	1	..	..	2	..	2	2	15	32	47
Total.....	1	38	..	..	4	175	..	..	97	4	161	1	3	2	35	..	..	48	2	7	42	192	428	620

CAUSES OF DEATH.

Table

Causes of Death arranged by Towns and

TOWNS IN ROCKINGHAM COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicemia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.					
Atkinson.....																						2							
Auburn.....									1													1							
Brentwood.....														1		1						3							
Candia.....																						1	1						
Chester.....																													
Danville.....																													
Deerfield.....																							1						
Derry.....							1															4	2						
East Kingston.....																						2							
Epping.....	2			1																		1							
Exeter.....	1			3			3		1													4							
Fremont.....	1																					1							
Greenland.....																													
Hampstead.....									1																				
Hampton.....																						1							
Hampton Falls.....																						1							
Kensington.....																													
Kingston.....																						1							
Londonderry.....																								1					
Newcastle.....																													
Newfields.....																													
Newington.....												2																	
Newmarket.....						2			1							1						4							
Newton.....																						1		1					
North Hampton.....																													
Northwood.....									1																				
Nottingham.....																													
Plaistow.....																						1							
Portsmouth.....	2					1	1	1								2						14	1						
Raymond.....																						1	1						
Rye.....					1																		2						
Salem.....	1																												
Sandown.....						1		1														3							
Seabrook.....																													
South Hampton.....																													
Stratham.....																													
Windham.....																													
Total.....	7			6	1	2	5	2	5			2		1		4					1	48	5	2					

No. 16.

Counties, 1913.—International Classification.

I. GENERAL DISEASES.—Continued.

[illegible]

Table

Causes of Death arranged by Towns and

TOWNS IN ROCKINGHAM COUNTY.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																	
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.	75. Diseases of the eye.	76. Diseases of the ear.
Atkinson.....					1						1							
Auburn.....					1	1												
Brentwood.....					1	4		1	1									
Candia.....						2												
Chester.....						1												
Danville.....						1		1										
Deerfield.....						2							1					
Derry.....		1				2	1	1										
East Kingston.....																		
Epping.....						1												
Exeter.....		1			2	4		4					4					
Fremont.....																		
Greenland.....						1												
Hampstead.....						1												
Hampton.....		1			2	1		3										
Hampton Falls.....								1										
Kensington.....																		
Kingston.....						2		1										
Londonderry.....						1		1										
Newcastle.....																		
Newfields.....																		
Newington.....						1												
Newmarket.....		3				2												
Newton.....						2												
North Hampton.....																		
Northwood.....					1	1		1										
Nottingham.....																		
Plaistow.....						1												
Portsmouth.....		3	1	1	1	14							3			2		
Raymond.....						1	4											
Rye.....																		
Salem.....						3		1					1					
Sandown.....		1																
Seabrook.....		2						2										
South Hampton.....						1												
Stratham.....																		
Windham.....					1	2												
Total.....	12	1	1	10	58	1	17	1	1	1	1	9	2			2		

No. 16.—Continued.

Counties, 1913.—International Classification.

III. DISEASES OF THE CIRCULATORY SYSTEM.										IV. DISEASES OF THE RESPIRATORY SYSTEM.												
77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries.	82. Embolism and thrombosis.	83. Diseases of the veins.	84. Diseases of the lymphatic system.	85. Hemorrhages.	86. Other diseases of the circulatory system.	87. Laryngitis.	88. Other diseases of the larynx.	89. Diseases of the thyroid body.	90. Acute bronchitis.	91. Chronic bronchitis.	92. Broncho-pneumonia.	93. Pneumonia.	94. Pleurisy.	95. Congestion and apoplexy of the lungs.	96. Gangrene of the lungs.	97. Asthma.	98. Pulmonary emphysema.	99. Other diseases of the respiratory system.
1	1	1		1										1								
		1		2										2					1			
		3																	1			
1		1		1	1									1								
	1	13	1	1									1									
		3		1																		
	1	5		2	2									1					2			
			1																			
		2		2																		
1		5																				
		1		1											1							
		1																				
		1		1																		
		1											1	1	1	1				1		
		1																				
		4																				
		3																				
	1	18	2	2	1								2		6	16			3		1	
		1		2	1																	
		2	1																			
		3		1										1	1	6						
		1																			1	
		2																				
		2																				
		1																				
		2																				
4	4	80	14	18	3								4	6	10	61		8		4		

Table

Causes of Death arranged by Towns and

TOWNS IN ROCKINGHAM COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.																		
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhea and enteritis (under 2 years).	106. Diarrhea and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.	118. Appendicitis.
Atkinson.....					1				1										
Auburn.....				1															
Brentwood.....													1						
Candia.....					1	1													
Chester.....					1	1	1												
Danville.....																			
Deerfield.....						1													
Derry.....					3	2													
East Kingston.....					1										1				
Epping.....						1													
Exeter.....						2			2						1		2		1
Fremont.....																			
Greenland.....							1												
Hampstead.....							1												
Hampton.....																			
Hampton Falls.....																			
Kensington.....																			
Kingston.....							2												
Londonderry.....						2													
Newcastle.....																			
Newfields.....																			
Newington.....																			
Newmarket.....					2	3			1				1						
Newton.....																			
North Hampton.....																			
Northwood.....																			
Nottingham.....																			
Plaistow.....					1				1										
Portsmouth.....	1				6	2	5		2				1				5		
Raymond.....							1												
Rye.....					1														
Salem.....				1	1								1						
Sandown.....					1														
Seabrook.....						1													
South Hampton.....							1												
Stratham.....						1													
Windham.....																			
Total.....	1	2	19	18	12	7	4	2	1	8	1								1

Table

Causes of Death arranged by Towns and

TOWNS IN ROCKINGHAM COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.		150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Atkinson.....												
Auburn.....												
Brentwood.....										1	1	
Candia.....										1		
Chester.....										1		
Danville.....												
Deerfield.....												
Derry.....					1				2	8	2	
East Kingston.....												
Epping.....										4		
Exeter.....	1									2	1	
Fremont.....										1		
Greenland.....												
Hampstead.....												
Hampton.....										1		
Hampton Falls.....												
Kensington.....												
Kingston.....												
Londonderry.....										1	1	
Newcastle.....												
Newfields.....												
Newington.....												
Newmarket.....										2		
Newton.....									1		2	
North Hampton.....												
Northwood.....									1			
Nottingham.....												
Plaistow.....										1		
Portsmouth.....	1								1	12	3	
Raymond.....									1	3		
Rye.....												
Salem.....												
Sandown.....										2		
Seabrook.....										1		
South Hampton.....									1			
Stratham.....										1		
Windham.....												
Total.....	2				1				7	42	10	

Table
Causes of Death arranged by Towns and

TOWNS IN STRAFFORD COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicæmia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.					
Barrington.....																					3								
Dover.....	3			1		2		1								1					19	1							
Durham.....																					2								
Farmington.....									1												2	1							
Lee.....																													
Madbury.....																													
Middleton.....				1																									
Milton.....							1															1							
New Durham.....																													
Rochester.....	1			1					2												6		1						
Rollinsford.....	1													1							1	1							
Somersworth.....	4		1	1			7	1			1										6								
Strafford.....																					2	1							
Total.....	9		1	4		2	8	2	3		1			1		1					41	5	1						

No. 16.—Continued.

Counties, 1913.—International Classification.

I. GENERAL DISEASES.—Continued.

30. Pott's disease.	31. Cold abscess, abscess by congestion.	32. White swelling.	33. Tuberculosis of other organs.	34. General tuberculosis.	35. Scrofula.	36. Syphilis.	37. Gonorrhea (5 years and over).	38. Gonorrhea (under 5 years).	39. Cancer and other malignant tumors of the buccal cavity.	40. Cancer of stomach and liver.	41. Cancer of intestines.	42. Cancer of genital organs.	43. Cancer of breast.	44. Cancer of skin.	45. Cancer of other or unspecified organs.	46. Tumors.	47. Acute articular rheumatism.	48. Chronic rheumatism and gout.	49. Scurvy.	50. Diabetes.	51. Exophthalmic goiter.	52. Addison's disease.	53. Leukemia.	54. Anemia, chlorosis.	55. Other general diseases.	56. Acute and chronic alcoholism.	57. Chronic lead poisoning.	59. Other chronic poisonings.
...	1	3	5	2	4	1	2	3	...	...	...	1	2	1	...	1	...	2	...	...
...	4	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
...	2	2	1	2	...	...	...	...	...	...	...	...	...	...	...	1	...	...
...	1	6	1	1	1	...	...	...	...	...	...	3	...	...	...	2	2	...	...	...
...	1	...	1	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...
...	2	21	5	7	5	...	3	3	...	...	...	7	1	...	4	...	6	...	...	...

Table

Causes of Death arranged by Towns and

TOWNS IN STRAFFORD COUNTY.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																	
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.	75. Diseases of the eye.	76. Diseases of the ear.
Barrington.....					1													
Dover.....		4		1	1	18		2								5		
Durham.....																		
Farmington.....	1				1	2	3	1										
Lee.....								1										
Madbury.....																		
Middleton.....						1		1										
Milton.....						1					1							
New Durham.....						1		1										
Rochester.....		6				7		5								1		
Rollinsford.....						1												
Somersworth.....		2			2	6							2					
Strafford.....						3		1										
Total.....	1	12		1	4	41	3	12			1		2			6		

No. 16.—Continued.

Counties, 1913.—International Classification.

III. DISEASES OF THE CIRCULATORY SYSTEM.										IV. DISEASES OF THE RESPIRATORY SYSTEM.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
77. Pericarditis.		78. Acute endocarditis.		79. Organic diseases of the heart.		80. Angina pectoris.		81. Diseases of the arteries.		82. Embolism and thrombosis.		83. Diseases of the veins.		84. Diseases of the lymphatic system.		85. Hemorrhages.		86. Other diseases of the circulatory system.		87. Laryngitis.		88. Other diseases of the larynx.		89. Diseases of the thyroid body.		90. Acute bronchitis.		91. Chronic bronchitis.		92. Broncho-pneumonia.		93. Pneumonia.		94. Pleurisy.		95. Congestion and apoplexy of the lungs.		96. Gangrene of the lungs.		97. Asthma.		98. Pulmonary emphysema.		99. Other diseases of the respiratory system.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
1	3	31	3	2	1		1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

Table

Causes of Death arranged by Towns and

TOWNS IN STRAFFORD COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.																			
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhœa and enteritis (under 2 years).	106. Diarrhœa and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.	118. Appendicitis.	
Barrington.....																				
Dover.....			1	2	6	2				1			2				2		2	
Durham.....																				
Farmington.....				1	1			1	1						1					
Lee.....								1												
Madbury.....					1															
Middleton.....																				
Milton.....				2	1			1					1							
New Durham.....			1																	
Rochester.....				2	8	1		2							1				1	
Rollinsford.....					2															
Somersworth.....				1	12			2					1							
Strafford.....																				
Total.....			2	8	31	3		7	2				4		2		2		3	

No. 16.—Continued.

Counties, 1913.—International Classification.

VI. DISEASES OF THE GENITO-URINARY SYSTEM AND ITS ADNEXA.												VII. THE PUERPERAL STATE.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
119. Acute nephritis.												120. Bright's disease.												121. Other diseases of the kidneys.												122. Calculi of the urinary tract.												123. Diseases of the bladder.												124. Diseases of the urethra.												125. Diseases of the prostate.												126. Non-venereal diseases of the male genital organs.												127. Metritis.												128. Uterine hemorrhage (non-puerperal).												129. Uterine tumor.												130. Other diseases of the uterus.												131. Cysts and other tumors of the ovary.												132. Other diseases of the female genital organs.												133. Non-puerperal diseases of the breast.												134. Accidents of pregnancy.												135. Puerperal hemorrhage.												136. Other accidents of labor.												137. Puerperal septicemia.												138. Puerperal albuminuria and convulsions.												139. Phlegmasia alba dolens (puerperal).												140. Other puerperal accidents.												141. Puerperal diseases of the breast.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
...	1	

Table

Causes of Death arranged by Towns and

TOWNS IN STRAFFORD COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.	150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Barrington.....												
Dover.....	1									14		
Durham.....		1										
Farmington.....									1	3		
Lee.....												
Madbury.....												
Middleton.....												
Milton.....	1									1	1	
New Durham.....	1											
Rochester.....				2						5	1	
Rollinsford.....										1		
Somersworth.....									2	10	2	
Strafford.....												
Total.....	3	1		2					3	34	4	

No. 16.—Continued.

Counties, 1913.—International Classification.

XII. OLD AGE.		XIII. EXTERNAL CAUSES.																				XIV. ILL-DEFINED DISEASES.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
154. Senile debility.		155. Suicide by poison.		156. Suicide by asphyxia.		157. Suicide by hanging or strangulation.		158. Suicide by drowning.		159. Suicide by firearms.		160. Suicide by cutting instruments.		161. Suicide by jumping from high places.		162. Suicide by crushing.		163. Other suicides.		164. Fractures.		165. Dislocations.		166. Other accidental traumatisms.		167. Burns and scalds.		168. Burns from corrosive substances.		169. Sunstroke.		170. Freezing.		171. Electric shock.		172. Accidental drowning.		173. Inanition (starvation).		174. Absorption of deleterious gases (non-suicidal).		175. Other acute poisonings.		176. Other external violence.		177. Dropsy.		178. Sudden death.		179. Causes of death unspecified or ill-defined.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
9	1		1								2												1			1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	

Table

Causes of Death arranged by Towns and

TOWNS IN BELKNAP COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicemia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.					
Alton.....																						1							
Barnstead.....				2		1			1													1	1						
Belmont.....									2																				
Center Harbor.....																													
Gilford.....									1													2							
Gilmanton.....																					1								
Laconia.....				1		3			1		1											6	2						
Meredith.....									1													1							
New Hampton.....																													
Sanbornton.....				1																		1							
Tilton.....				1		1																1							
Total.....				5		5			6		1											14	3						

No. 16.—Continued.

Counties, 1913.—International Classification.

III. DISEASES OF THE CIRCULATORY SYSTEM.										IV. DISEASES OF THE RESPIRATORY SYSTEM.												
77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries.	82. Embolism and thrombosis.	83. Diseases of the veins.	84. Diseases of the lymphatic system.	85. Hemorrhages.	86. Other diseases of the circulatory system.	87. Laryngitis.	88. Other diseases of the larynx.	89. Diseases of the thyroid body.	90. Acute bronchitis.	91. Chronic bronchitis.	92. Broncho-pneumonia.	93. Pneumonia.	94. Pleurisy.	95. Congestion and apoplexy of the lungs.	96. Gangrene of the lungs.	97. Asthma.	98. Pulmonary emphysema.	99. Other diseases of the respiratory system.
		6														3						
		3	1										1	1	1	3						
		2													1	2						
		1											1									
		2		1											1	1	1					
		1		1										1								
.....	1	20	3	5	1								2	1	7	15						1
		2		2												2						
		2									1					2						
		2														1						
		1		1	2		2						1			1	1					
.....	1	42	4	10	3		2				1	5	3	10	30	2						1

Table

Causes of Death arranged by Towns and

TOWNS IN BELKNAP COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.																	
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhoea and enteritis (under 2 years).	106. Diarrhoea and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.
Alton.....				1		1												
Barnstead.....						1			1									
Belmont.....					1	2			1									
Center Harbor.....																		
Gilford.....					1				1									
Gilmanton.....																		
Laconia.....			1	3	7	2			1									
Meredith.....			1	2		2												1
New Hampton.....					1	1							1					1
Sanbornton.....																		
Tilton.....	1			3					1									
Total.....	1	3	11	12	4				5				1					2

Table

Causes of Death arranged by Towns and

TOWNS IN BELKNAP COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.	150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Alton.....												
Barnstead.....									1			
Belmont.....										1		
Center Harbor.....												
Gilford.....										1		
Gilmanton.....										1		
Laconia.....			1							10	7	
Meredith.....										1		
New Hampton.....												
Sanbornton.....												
Tilton.....												
Total.....			1						1	14	7	

No. 16.—Continued.

Counties, 1913.—International Classification.

[illegible]

Table

Causes of Death arranged by Towns and

TOWNS IN CARROLL COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Military fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicemia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.					
Albany.....																						1							
Bartlett.....																					2								
Brookfield.....																													
Chatham.....																													
Conway.....									1													4							
Eaton.....																					1								
Effingham.....	1								1												1								
Freedom.....									1																				
Hart's Location.....																													
Jackson.....																													
Madison.....																													
Moultonborough.....																													
Ossipee.....									1																				
Sandwich.....									3													2							
Tamworth.....																													
Tuftonborough.....																					1								
Wakefield.....	1																				1								
Wolfeborough.....	1								1																				
Total.....	3								8												13								

Table

Causes of Death arranged by Towns and

TOWNS IN CARROLL COUNTY.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.															
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.
Albany.....																
Bartlett.....																
Brookfield.....						1										
Chatham.....																
Conway.....						2		2								
Eaton.....																
Effingham.....						2										
Freedom.....						1										
Hart's Location.....																
Jackson.....						1										
Madison.....																
Moultonborough.....						3										
Ossipee.....						3										1
Sandwich.....						3					1					
Tamworth.....						1										
Tuftonborough.....							1									
Wakefield.....						4										
Wolfeboro.....						6										
Total.....						27	1	2			1					1

No. 16.—Continued.

Counties, 1913.—International Classification.

III. DISEASES OF THE CIRCULATORY SYSTEM.										IV. DISEASES OF THE RESPIRATORY SYSTEM.												
77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries.	82. Embolism and thrombosis.	83. Diseases of the veins.	84. Diseases of the lymphatic system.	85. Hemorrhages.	86. Other diseases of the circulatory system.	87. Laryngitis.	88. Other diseases of the larynx.	89. Diseases of the thyroid body.	90. Acute bronchitis.	91. Chronic bronchitis.	92. Broncho-pneumonia.	93. Pneumonia.	94. Pleurisy.	95. Congestion and apoplexy of the lungs.	96. Gangrene of the lungs.	97. Asthma.	98. Pulmonary emphysema.	99. Other diseases of the respiratory system.
		1			1											2						
																1						
		6			6	1							1	1	1	8		1				
		1																				
																2						
					2																	
																	1					
		1			2								1									
		3				1									1	3						
		4	1		3							2				2						
		1														1						
	1	2			1							1										
		3			1																	
		3			2								1	1		2		1				
		10			3									1		4						
1		35	1	17	6								6	2	3	26		2				

Table

Causes of Death arranged by Towns and

TOWNS IN CARROLL COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.																		
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhœa and enteritis (under 2 years).	106. Diarrhœa and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.	118. Appendicitis.
Albany.....					2														
Bartlett.....						2													
Brookfield.....																			
Chatham.....																			
Conway.....					3	2							1				2		
Eaton.....																			
Effingham.....																			
Freedom.....																			
Hart's Location.....					1														
Jackson.....																			
Madison.....																			
Moultonborough.....					1														
Ossipee.....	1				2	3	2												
Sandwich.....																			
Tamworth.....					1	1	2		1										
Tuftonborough.....																			
Wakefield.....					1														
Wolfeboro.....						1	1		1								1		
Total.....	1				11	9	5		2				1				3		

Table

Causes of Death arranged by Towns and

TOWNS IN CARROLL COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.		150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Albany.....												
Bartlett.....										2		
Brookfield.....												
Chatham.....												
Conway.....	1								1	1	1	
Eaton.....												
Effingham.....												
Freedom.....											1	
Hart's Location.....												
Jackson.....												
Madison.....												
Moultonborough.....												
Ossipee.....										2		
Sandwich.....										2		
Tamworth.....												
Tuftonborough.....										1		
Wakefield.....									1			
Wolfeboro.....		1								2		
Total.....	1	1							2	10	2	

No. 16.—Continued.

Counties, 1913.—International Classification.

XII. OLD AGE.		XIII. EXTERNAL CAUSES.		XIV. ILL-DEFINED DISEASES.	
154. Senile debility.		155. Suicide by poison.		157. Suicide by hanging or strangulation.	
		156. Suicide by asphyxia.		158. Suicide by drowning.	
				159. Suicide by firearms.	
				160. Suicide by cutting instruments.	
				161. Suicide by jumping from high places.	
				162. Suicide by crushing.	
				163. Other suicides.	
				164. Fractures.	
				165. Dislocations.	
				166. Other accidental traumatisms.	
				167. Burns and scalds.	
				168. Burns from corrosive substances.	
				169. Sunstroke.	
				170. Freezing.	
				171. Electric shock.	
				172. Accidental drowning.	
				173. Inanition (starvation).	
				174. Absorption of deleterious gases (non-suicidal).	
				175. Other acute poisonings.	
				176. Other external violence.	
				177. Dropsy.	
				178. Sudden death.	
				179. Causes of death unspecified or ill-defined.	
13	1	3	1	6	1

Table

Causes of Death arranged by Towns and

TOWNS IN MERRIMACK COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicæmia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	25. Pellagra.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.				
Allenstown.....				2																			1						
Andover.....									1																				
Boscawen.....				1					2														2						
Bow.....	1																						1						
Bradford.....																													
Canterbury.....	1																												
Chichester.....																													
Concord.....	2			2		2	3		1			3		5		1							1						
Danbury.....				1					1												1	20	1	1					
Dunbarton.....																													
Epsom.....																													
Franklin.....	1			1		1			1														6	1	1				
Henniker.....						1																							
Hill.....																							2						
Hooksett.....				1																			1						
Hopkinton.....							1	1															3						
Loudon.....																													
Newbury.....																													
New London.....												1											1						
Northfield.....				1					1														1						
Pembroke.....				1																		18							
Pittsfield.....						1	1		1													1		1					
Salisbury.....				1																									
Sutton.....																							2						
Warner.....																													
Webster.....				1					1																				
Wilmot.....																							2						
Total.....	5		12		5	5	1	9				4		5		1					1	62	2	3					

Table

Causes of Death arranged by Towns and

TOWNS IN MERRIMACK COUNTY.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																	
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.	75. Diseases of the eye.	76. Diseases of the ear.
Allenstown.....	1			1	2													
Andover.....				1	1													
Boscawen.....					6			1										
Bow.....					3													
Bradford.....					1													
Canterbury.....					1													
Chichester.....					2													
Concord.....	2			2	44		3	5	18	8			1			3		
Danbury.....					2		1											
Dunbarton.....																		
Epsom.....					9		2											
Franklin.....	2			2	1						2							
Henniker.....					3		1				1		1					
Hill.....					2													
Hooksett.....	2				2													
Hopkinton.....	1				4		3				1							
Loudon.....					1													
Newbury.....																		
New London.....	1																	
Northfield.....					2													
Pembroke.....					1													
Pittsfield.....					3			1								2		
Salisbury.....					1													
Sutton.....																		
Warner.....					2													
Webster.....																		
Wilmot.....					1		1											
Total.....	1	8		1	5	94	12	6	18	12		2				5		

No. 16.—Continued.

Counties, 1913.—International Classification.

III. DISEASES OF THE CIRCULATORY SYSTEM.										IV. DISEASES OF THE RESPIRATORY SYSTEM.												
77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries.	82. Embolism and thrombosis.	83. Diseases of the veins.	84. Diseases of the lymphatic system.	85. Hemorrhages.	86. Other diseases of the circulatory system.	87. Laryngitis.	88. Other diseases of the larynx.	89. Diseases of the thyroid body.	90. Acute bronchitis.	91. Chronic bronchitis.	92. Broncho-pneumonia.	93. Pneumonia.	94. Pleurisy.	95. Congestion and apoplexy of the lungs.	96. Gangrene of the lungs.	97. Asthma.	98. Pulmonary emphysema.	99. Other diseases of the respiratory system.
...	...	2	...	2	...	...	...	...	...	...	...	...	...	...	1	5	...	...	...	...	...	...
...	...	5	1	2	...	...	...	...	...	...	...	...	1	...	...	1	...	...	2	...	...	...
...	...	3	...	1	...	...	...	...	...	...	...	...	1	1	...	1	...	1	...	...	...	...
...	...	3	...	1	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...
...	...	3	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...
2	3	55	1	20	7	...	...	...	...	...	...	...	3	3	8	34	2	4	...	...	...	1
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	1	...	...	...	...	...	...	...	...	...	...	1	1	...	2	...	...	...	...	...	...
...	...	7	...	1	...	...	...	...	...	...	...	...	...	...	4	9	...	...	...	...	...	...
...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
...	4	...	...	1	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
...	2	2	...	...	...	...	...	...	...	...	...	...	...	4	...	1	...	...	...	...
...	4	...	...	...	...	...	...	...	...	...	...	...	...	7	...	1	...	...	...	...
...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...
...	1	...	...	...	...	...	...	...	...	...	1	...	...	2	...	1	...	...	...	...
...	1	...	...	...	...	1	...	...	...	...	...	...	...	4	...	...	...	...	...	...
1	...	3	2	3	...	...	...	...	...	...	...	...	1	1	3	4	...	...	...	...	...	...
...	...	6	1	1	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...
...	1	...	...	...	...	...	...	...	...	...
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
...	...	6	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...
...	...	4	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	2	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
3	3	122	10	38	9	1	...	2	...	...	...	...	5	11	18	86	3	10	...	1	...	1

Table

Causes of Death arranged by Towns and

TOWNS IN MERRIMACK COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.																		
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhœa and enteritis (under 2 years).	106. Diarrhœa and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.	118. Appendicitis.
Allenstown.....					1	5			1										
Andover.....																			
Boscawen.....			1	1	2	1							1						
Bow.....																1			
Bradford.....																			
Canterbury.....																			
Chichester.....																			
Concord.....			2	2	14	11		9	1			3		3		3			1
Danbury.....						1													
Dunbarton.....																			
Epsom.....																			
Franklin.....				3	7			1									1		
Henniker.....							2									1			
Hill.....																			
Hooksett.....						3									1				
Hopkinton.....																			
Loudon.....								1							1				1
Newbury.....																			
New London.....								1											
Northfield.....																			
Pembroke.....				1	8									1				1	
Pittsfield.....							1					1		1					
Salisbury.....																			
Sutton.....									1										
Warner.....									1										
Webster.....																			
Wilmot.....					1														
Total.....			3	9	39	16			15	1			5	1	7	1	5		2

No. 16.—Continued.

Counties, 1913.—International Classification.

VI. DISEASES OF THE GENITO-URINARY SYSTEM AND ITS ADNEXA.														VII. THE PUERPERAL STATE.									
119. Acute nephritis.	120. Bright's disease.	121. Other diseases of the kidneys.	122. Calculi of the urinary tract.	123. Diseases of the bladder.	124. Diseases of the urethra.	125. Diseases of the prostate.	126. Non-venereal diseases of the male genital organs.	127. Metritis.	128. Uterine hemorrhage (non-puerperal).	129. Uterine tumor.	130. Other diseases of the uterus.	131. Cysts and other tumors of the ovary.	132. Other diseases of the female genital organs.	133. Non-puerperal diseases of the breast.	134. Accidents of pregnancy.	* 135. Puerperal hemorrhage.	136. Other accidents of labor.	137. Puerperal septicemia.	138. Puerperal albuminuria and convulsions.	139. Phlegmasia alba dolens (puerperal).	140. Other puerperal accidents.	141. Puerperal diseases of the breast.	
1	1			1																			
4	30	1		3							1				2								
	1																						
	2																						
	4																						
	1																						
	1																						
	1																						
	1																						
	2					1																	
	1																						
	5																						
	2																						
7	55	1		4		1					1				2				4		1		

Table

Causes of Death arranged by Towns and

TOWNS IN MERRIMACK COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.	150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Allenstown	1	.	.	.	.	.	.	.	.	1	1	.
Andover	1	.	.	.	.	.	.	.	1	1	.	.
Boscawen . . . . .	.	.	.	.	.	.	.	.	.	.	.	.
Bow . . . . .	.	.	.	.	.	.	.	.	.	.	.	.
Bradford . . . . .	.	.	.	.	.	.	.	.	.	.	.	.
Canterbury	1	.	.	.	.	.	.	.	.	.	.	.
Chichester . . . . .	.	.	.	.	.	.	.	.	.	.	.	.
Concord	1	.	1	.	1	.	.	.	1	20	2	.
Danbury . . . . .	.	.	.	.	.	.	.	.	.	.	.	.
Dunbarton	1	.	.	.	.	.	.	.	.	.	.	.
Epsom . . . . .	.	.	.	.	.	.	.	.	.	.	.	.
Franklin . . . . .	.	1	.	.	.	.	.	.	2	5	1	.
Henniker . . . . .	.	.	.	.	.	.	.	.	.	1	.	.
Hill . . . . .	.	.	.	.	.	.	.	.	.	.	.	.
Hooksett . . . . .	.	.	.	.	.	.	.	.	.	1	.	.
Hopkinton . . . . .	.	.	.	.	.	.	.	.	.	.	.	.
Loudon	1	.	.	.	.	.	.	.	.	1	.	.
Newbury . . . . .	.	.	.	.	.	.	.	.	.	1	.	.
New London . . . . .	.	.	.	.	.	.	.	.	.	.	.	.
Northfield . . . . .	.	.	.	.	.	.	.	.	.	2	.	.
Pembroke . . . . .	.	.	.	.	.	.	.	.	.	5	.	.
Pittsfield . . . . .	.	.	.	.	.	.	.	.	.	5	.	.
Salisbury . . . . .	.	.	.	.	.	.	.	.	.	1	.	.
Sutton	1	.	.	.	.	.	.	.	.	.	.	.
Warner . . . . .	.	.	.	.	.	.	.	.	.	1	.	.
Webster . . . . .	.	.	.	.	.	.	.	.	.	.	.	.
Wilmot . . . . .	.	.	.	.	.	.	.	.	1	.	.	.
Total	7	1	1	.	1	.	.	.	5	45	3	.

No. 16.—*Continued.*

Counties, 1913.—International Classification.

XII. OLD AGE.		XIII. EXTERNAL CAUSES.										XIV. ILL-DEFINED DISEASES.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
154. Senile debility.		155. Suicide by poison.		156. Suicide by asphyxia.		157. Suicide by hanging or strangulation.		158. Suicide by drowning.		159. Suicide by firearms.		160. Suicide by cutting instruments.		161. Suicide by jumping from high places.		162. Suicide by crushing.		163. Other suicides.		164. Fractures.		165. Dislocations.		166. Other accidental traumatisms.		167. Burns and scalds.		168. Burns from corrosive substances.		169. Sunstroke.		170. Freezing.		171. Electric shock.		172. Accidental drowning.		173. Inanition (starvation).		174. Absorption of deleterious gases (non-suicidal).		175. Other acute poisonings.		176. Other external violence.		177. Dropsy.		178. Sudden death.		179. Causes of death unspecified or ill-defined.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
2										1													1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				</

Table

Causes of Death arranged by Towns and

TOWNS IN HILLSBOROUGH COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septiceemia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.					
Amherst.....																						3							
Antrim.....																						3							
Bedford.....							1															1							
Bennington.....																						2							
Brookline.....				1					1													1							
Deering.....																													
Francestown.....																													
Goffstown.....																						29	1	3					
Greenfield.....																													
Greenville.....																						1							
Hancock.....																													
Hillsborough.....				1																									
Hollis.....																													
Hudson.....																													
Litchfield.....																													
Lyndeborough.....																													
Manchester.....	6		1	5	6	2	10	5	3			1		1		3	1				1	87	12	5					
Mason.....																													
Merrimack.....	1						1															1	1						
Milford.....						2	1		2													3		1					
Mont Vernon.....																						1		1					
Nashua.....	3					2	6	1	1					1		2						20	7	2					
New Boston.....									1																				
New Ipswich.....												1																	
Pelham.....																													
Peterborough.....																						2							
Sharon.....																													
Temple.....																							1						
Weare.....																					1								
Wilton.....																													
Windsor.....																						2							
Total.....	10		1	7	8	4	19	6	8			2		2		5	1				2	155	22	12					

No. 16.—*Continued.*

Counties, 1913.—International Classification.

I. GENERAL DISEASES.—*Continued.*

30. Pott's disease.	31. Cold abscess, abscess by congestion.	32. White swelling.	33. Tuberculosis of other organs.	34. General tuberculosis.	35. Scrofula.	36. Syphilis.	37. Gonorrhea (5 years and over).	38. Gonorrhea (under 5 years).	39. Cancer and other malignant tumors of the buccal cavity.	40. Cancer of stomach and liver.	41. Cancer of intestines.	42. Cancer of genital organs.	43. Cancer of breast.	44. Cancer of skin.	45. Cancer of other or unspecified organs.	46. Tumors.	47. Acute articular rheumatism.	48. Chronic rheumatism and gout.	49. Scurvy.	50. Diabetes.	51. Exophthalmic goiter.	52. Addison's disease.	53. Leukemia.	54. Anemia, chlorosis.	55. Other general diseases.	56. Acute and chronic alcoholism.	57. Chronic lead poisoning.	59. Other chronic poisonings.
..	1	..	..	..	..	1	..	..	..	1	..	..	..	..
..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..
..	1	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
2	2	4	1	1	..	1	1	..	1	..	..	3	..	..	..	1	..	..	..	..
..	2	..	..	..	..	1	..	1	..	..	..	..	..	..	2	..	..	..	..
..	2	2	2	1	..	1	..	..	..	..	1	..	..	..	1	1	..	..	..
..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1	1	16	10	11	4	..	9	1	8	1	..	10	1	..	1	16	1	5	..	..
1	..	1	..	..	..	4	..	..	2	1	1	2	1	..	1	..	..	..	..	2	..	..	1	1	..	..	..	..
..	1	9	2	3	1	2	6	4	..	..	..	3	..	..	1	1	..	..	..	..
..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	2	2	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..
..	1	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..
..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
5	1	..	..	4	..	..	5	39	21	20	11	3	23	1	14	1	..	24	1	..	2	29	1	5	..	..

Table

Causes of Death arranged by Towns and

TOWNS IN HILLSBOROUGH COUNTY.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.															
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.
Amherst.....						4										
Antrim.....	1					1										1
Bedford.....						2										
Bennington.....																
Brookline.....						1										
Deering.....						1										
Francestown.....						1										
Goffstown.....	1			1	2	8			3	1						
Greenfield.....																1
Greenville.....				1		1		1								
Hancock.....						3										
Hillsborough.....						2			1							
Hollis.....	1					2		1								
Hudson.....	1			1		3										
Litchfield.....																
Lyndeborough.....						2		1								
Manchester.....	1	29	1	3	16	61	1	7			1		8			5
Mason.....																
Merrimack.....						2										
Milford.....						5							1			
Mont Vernon.....						2										
Nashua.....	7			1	19			6					2		1	1
New Boston.....						2										
New Ipswich.....						1		1								
Pelham.....						3										
Peterborough.....						2							1			
Sharon.....																
Temple.....																
Weare.....				1		3		1								
Wilton.....						2		1								
Windsor.....																
Total.....	1	40	1	5	21	133	1	19		4	2		12		1	8

Table

Causes of Death arranged by Towns and

TOWNS IN HILLSBOROUGH COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.													
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhoea and enteritis (under 2 years).	106. Diarrhoea and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.
Amherst.....						1								
Antrim.....					2		1							
Bedford.....							1							1
Bennington.....														
Brookline.....						1								
Deering.....														
Fracestown.....										1				
Goffstown.....					1	5	5		1				3	
Greenfield.....														
Greenville.....														
Hancock.....					1									
Hillsborough.....					1	2			1	1				1
Hollis.....														
Hudson.....					2	2							1	
Litchfield.....					1								1	
Lyndeborough.....														
Manchester.....	1	1	21	166	11		16	1		8	2	3	8	1
Mason.....						1								1
Merrimack.....					2	2		1						
Milford.....														
Mont Vernon.....														
Nashua.....					5	48	4	3	1		6			8
New Boston.....							1							
New Ipswich.....										1				
Pelham.....														
Peterborough.....					1								1	
Sharon.....														
Temple.....														
Weare.....														
Wilton.....					1	1								
Windsor.....														
Total.....	1	2	37	229	22		22	5		19	4	5	19	1

No. 16.—Continued.

Counties, 1913.—International Classification.

VI. DISEASES OF THE GENITO-URINARY SYSTEM AND ITS ADNEXA.														VII. THE PUERPERAL STATE.									
119. Acute nephritis.	120. Bright's disease.	121. Other diseases of the kidneys.	122. Calculi of the urinary tract.	123. Diseases of the bladder.	124. Diseases of the urethra.	125. Diseases of the prostate.	126. Non-venereal diseases of the male genital organs.	127. Metritis.	128. Uterine hemorrhage (non-puerperal).	129. Uterine tumor.	130. Other diseases of the uterus.	131. Cysts and other tumors of the ovary.	132. Other diseases of the female genital organs.	133. Non-puerperal diseases of the breast.	134. Accidents of pregnancy.	135. Puerperal hemorrhage.	136. Other accidents of labor.	137. Puerperal septicemia.	138. Puerperal albuminuria and convulsions.	139. Phlegmasia alba dolens (puerperal).	140. Other puerperal accidents.	141. Puerperal diseases of the breast.	
...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	10	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	7	48	4	1	5	2	...	...	2	1	...	...	1	...	4	1	...	13	...	...	...	...
...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	3	24	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
...	
...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12	114	6	2	11	...	2	...	...	2	1	...	...	1	...	5	2	...	1	15	...	1	...

Table

Causes of Death arranged by Towns and

TOWNS IN HILLSBOROUGH COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.		151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Amherst.....										1		
Antrim.....										2	1	
Bedford.....												
Bennington.....	1									1		
Brookline.....												
Deering.....												
Francestown.....												
Goffstown.....	1									5		
Greenfield.....										1		
Greenville.....					1				1			
Hancock.....												
Hillsborough.....	1											
Hollis.....												
Hudson.....	1											
Litchfield.....										1		
Lyndeborough.....												
Manchester.....	4		2		2				15	94	10	
Mason.....										1		
Merrimack.....										2		
Milford.....										6		
Mont Vernon.....										1		
Nashua.....									4	34	1	
New Boston.....										1		
New Ipswich.....										2	1	
Pelham.....										1		
Peterborough.....									1	3	1	
Sharon.....												
Temple.....												
Weare.....									1	1		
Wilton.....									2			
Windsor.....												
Total.....	8		2		3				24	157	14	

No. 16.—Continued.

Counties, 1913.—International Classification.

XII. OLD AGE.										XIII. EXTERNAL CAUSES.														XIV. ILL-DEFINED DISEASES.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
154. Senile debility.										155. Suicide by poison.										156. Suicide by asphyxia.										157. Suicide by hanging or strangulation.										158. Suicide by drowning.										159. Suicide by firearms.										160. Suicide by cutting instruments.										161. Suicide by jumping from high places.										162. Suicide by crushing.										163. Other suicides.										164. Fractures.										165. Dislocations.										166. Other accidental traumatisms.										167. Burns and scalds.										168. Burns from corrosive substances.										169. Sunstroke.										170. Freezing.										171. Electric shock.										172. Accidental drowning.										173. Inanition (starvation).										174. Absorption of deleterious gases (non-suicidal).										175. Other acute poisonings.										176. Other external violence.										177. Dropsy.										178. Sudden death.										179. Causes of death unspecified or ill-defined.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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Table

Causes of Death arranged by Towns and

TOWNS IN CHESHIRE COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicemia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.					
Alstead																						1							
Chesterfield						1																							
Dublin																													
Fitzwilliam																						1							
Gilsum																					1								
Harrisville																					2								
Hinsdale	2																				1	1							
Jaffrey				1				1	1																				
Keene	4											1																	
Marlborough																													
Marlow																					1								
Nelson																						1							
Richmond																													
Rindge																												1	
Roxbury																													
Stoddard																													
Sullivan																													
Surry																													
Swanzy																							1						
Troy	1			1																		2							
Walpole																1				1		2							
Westmoreland																						1							
Winchester					3				2		1	1										1							
Total	7			2	3	1		1	3		1	2				1			1		24	1	2						

Table

Causes of Death arranged by Towns and

TOWNS IN CHESHIRE COUNTY.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																		
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.	75. Diseases of the eye.	76. Diseases of the ear.	
Alstead.....						1		1											
Chesterfield.....		1				1													
Dublin.....						2													
Fitzwilliam.....																			
Gilsum.....						1													
Harrisville.....						1													
Hinsdale.....		1				5					1								
Jaffrey.....		1				4													
Keene.....		1				11		1			2								
Marlborough.....						2					1								
Marlow.....						3													
Nelson.....																			
Richmond.....																			
Rindge.....		1																	
Roxbury.....																			
Stoddard.....						1													
Sullivan.....																			
Surry.....																			
Swanzy.....						2													
Troy.....				1				1			1								
Walpole.....		1				1								1					
Westmoreland.....		1				4													
Winchester.....							1	1			1								
Total.....	7			1		39	1	4			6		2						

No. 16.—*Continued.*

Counties, 1913.—International Classification.

III. DISEASES OF THE CIRCULATORY SYSTEM.										IV. DISEASES OF THE RESPIRATORY SYSTEM.												
77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries.	82. Embolism and thrombosis.	83. Diseases of the veins.	84. Diseases of the lymphatic system.	85. Hemorrhages.	86. Other diseases of the circulatory system.	87. Laryngitis.	88. Other diseases of the larynx.	89. Diseases of the thyroid body.	90. Acute bronchitis.	91. Chronic bronchitis.	92. Broncho-pneumonia.	93. Pneumonia.	94. Pleurisy.	95. Congestion and apoplexy of the lungs.	96. Gangrene of the lungs.	97. Asthma.	98. Pulmonary emphysema.	99. Other diseases of the respiratory system.
.....	4	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....
.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
.....	2	25	2	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....
.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
.....
.....	6	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....
.....	4	.....	2	2	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	4	.....	.....	.....	.....	.....	.....
.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	1	3	2	4	.....	.....	.....	.....	.....	.....
.....	9	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
.....	3	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	5	.....	.....	.....	.....	.....	.....
.....	5	56	8	38	3	.....	.....	.....	.....	1	.....	.....	4	6	11	51	.....	1	.....	.....	.....	.....

Table

Causes of Death arranged by Towns and

TOWNS IN CHESHIRE COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.																		
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhoea and enteritis (under 2 years).	106. Diarrhoea and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestine.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.	118. Appendicitis.
Alstead.....	1					1													
Chesterfield.....							1												
Dublin.....																			
Fitzwilliam.....																			
Gilsum.....																			
Harrisville.....					1	1													
Hinsdale.....						3													
Jaffrey.....					1	1													
Keene.....					2	4	1		1				4		1		2		2
Marlborough.....					1	1													1
Marlow.....					1														
Nelson.....																			
Richmond.....																			
Rindge.....					2														
Roxbury.....																			
Stoddard.....																			
Sullivan.....																			
Surry.....																			
Swanzey.....					2	1			1	1			1						
Troy.....						1													
Walpole.....							2						1						
Westmoreland.....					1		1												1
Winchester.....					1	3	2												
Total.....	1				12	16	7		2	1			6		1		2		4

No. 16.—Continued.

Counties, 1913.—International Classification.

VI. DISEASES OF THE GENITO-URINARY SYSTEM AND ITS ADNEXA.										VII. THE PUERPERAL STATE.									
119. Acute nephritis.																			
120. Bright's disease.	1																		
121. Other diseases of the kidneys.																			
122. Calculi of the urinary tract.																			
123. Diseases of the bladder.																			
124. Diseases of the urethra.																			
125. Diseases of the prostate.																			
126. Non-venereal diseases of the male genital organs.																			
127. Metritis.																			
128. Uterine hemorrhage (non-puerperal).																			
129. Uterine tumor.																			
130. Other diseases of the uterus.																			
131. Cysts and other tumors of the ovary.																			
132. Other diseases of the female genital organs.																			
133. Non-puerperal diseases of the breast.																			
134. Accidents of pregnancy.																			
135. Puerperal hemorrhage.																			
136. Other accidents of labor.																			
137. Puerperal septicemia.																			
138. Puerperal albuminuria and convulsions.																			
139. Phlegmasia alba dolens (puerperal).																			
140. Other puerperal accidents.																			
141. Puerperal diseases of the breast.																			
2	23	1								2			2		1	1			

Table

Causes of Death arranged by Towns and

TOWNS IN CHESHIRE COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.		150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Alstead.....												
Chesterfield.....												
Dublin.....												
Fitzwilliam.....									1	1		
Gilsum.....												
Harrisville.....										1		
Hinsdale.....	1											
Jaffrey.....										3		
Keene.....	2				1				3	5	1	
Marlborough.....	1									2		
Marlow.....									1			
Nelson.....												
Richmond.....												
Rindge.....										1		
Roxbury.....												
Stoddard.....												
Sullivan.....												
Surry.....												
Swanzey.....												
Troy.....										1		
Walpole.....									1			
Westmoreland.....									1			
Winchester.....									1	2	1	
Total.....	4				1				8	16	2	

No. 16.—Continued.

Counties, 1913.—International Classification.

XII.	Old Age.
154.	Senile debility.
155.	Suicide by poison.
156.	Suicide by asphyxia.
157.	Suicide by hanging or strangulation.
158.	Suicide by drowning.
159.	Suicide by firearms.
160.	Suicide by cutting instruments.
161.	Suicide by jumping from high places.
162.	Suicide by crushing.
163.	Other suicides.
164.	Fractures.
165.	Dislocations.
166.	Other accidental traumatisms.
167.	Burns and scalds.
168.	Burns from corrosive substances.
169.	Sun-stroke.
170.	Freezing.
171.	Electric shock.
172.	Accidental drowning.
173.	Inanition (starvation).
174.	Absorption of deleterious gases (non-suicidal).
175.	Other acute poisonings.
176.	Other external violence.
177.	Dropsy.
178.	Sudden death.
179.	Causes of death unspecified or ill-defined.

Table

Causes of Death arranged by Towns and

TOWNS IN SULLIVAN COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicæmia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.					
Acworth.....																												1	
Charlestown.....	1			1			1																					3	
Claremont.....	1			1							1																	8	2
Cornish.....																													
Croydon.....																													
Goshen.....																													
Grantham.....																													
Langdon.....				2																									
Lempster.....																												1	
Newport.....									1					1														2	1
Plainfield.....																												1	
Springfield.....																													
Sunapee.....														1														1	
Unity.....																													
Washington.....																													
	2			4			1		1		1			2													17	2	1

No. 16.—Continued.

Counties, 1913.—International Classification.

I. GENERAL DISEASES.—Continued.

30. Pott's disease.																													
31. Cold abscess, abscess by congestion.																													
32. White swelling.																													
33. Tuberculosis of other organs.																													
34. General tuberculosis.																													
35. Scrofula.																													
36. Syphilis.																													
37. Gonorrhea (5 years and over).																													
38. Gonorrhea (under 5 years).																													
39. Cancer and other malignant tumors of the buccal cavity.	1																												
40. Cancer of stomach and liver.																													
41. Cancer of intestines.										1	1																		
42. Cancer of genital organs.										1	2																		
43. Cancer of breast.												4																	
44. Cancer of skin.														1															
45. Cancer of other or unspecified organs.															1														
46. Tumors.																													
47. Acute articular rheumatism.																1													
48. Chronic rheumatism and gout.																													
49. Scurvy.																													
50. Diabetes.																													
51. Exophthalmic goiter.																													
52. Addison's disease.																													
53. Leukemia.																													
54. Anemia, chlorosis.																													
55. Other general diseases.																													
56. Acute and chronic alcoholism.																													
57. Chronic lead poisoning.																													
59. Other chronic poisonings.																													
	1									10	5	1	4	2	1		2			1							2		

Table
Causes of Death arranged by Towns and

TOWNS IN SULLIVAN COUNTY.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																	
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.	75. Diseases of the eye.	76. Diseases of the ear.
Acworth.....							1											
Charlestown.....	1													1				
Claremont.....					5													
Cornish.....							1											
Croydon.....																		
Goshen.....			1															
Grantham.....																		
Langdon.....																		
Lempster.....																		
Newport.....					1	4										1		
Plainfield.....					1											1		
Springfield.....													1					
Sunapee.....						1												
Unity.....																		
Washington.....																		
Total.....	1			1	1	10	1	2					1	1		2		

No. 16.—Continued.

Counties, 1913.—International Classification.

III. DISEASES OF THE CIRCULATORY SYSTEM.										IV. DISEASES OF THE RESPIRATORY SYSTEM.												
77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries.	82. Embolism and thrombosis.	83. Diseases of the veins.	84. Diseases of the lymphatic system.	85. Hemorrhages.	86. Other diseases of the circulatory system.	87. Laryngitis.	88. Other diseases of the larynx.	89. Diseases of the thyroid body.	90. Acute bronchitis.	91. Chronic bronchitis.	92. Broncho-pneumonia.	93. Pneumonia.	94. Pleurisy.	95. Congestion and apoplexy of the lungs.	96. Gangrene of the lungs.	97. Asthma.	98. Pulmonary emphysema.	99. Other diseases of the respiratory system.
.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	1	.....	.....	.....	.....	.....	.....
.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....
.....	1	12	.....	13	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	7	.....	1	.....	1	.....	.....
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....
2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
.....	5	1	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	4	.....	.....	.....	.....	.....	.....
.....	3	1	2	.....	.....	.....	.....	.....	.....	.....	.....	2	1	.....	1	.....	.....	.....	.....	.....	.....
.....
.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
3	1	39	3	21	.....	.....	.....	.....	.....	.....	.....	.....	1	4	6	24	1	1	.....	1	.....	.....

Table

Causes of Death arranged by Towns and

TOWNS IN SULLIVAN COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.																		
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhea and enteritis (under 2 years).	106. Diarrhea and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.	118. Appendicitis.
Acworth.....																			1
Charlestown.....						1											1		
Claremont.....					4	5			4				1		1		1		
Cornish.....									1								1		
Croydon.....																			
Goshen.....																			
Grantham.....																			
Langdon.....																			
Lempster.....						2													
Newport.....					4	4									1				1
Plainfield.....							2								1				
Springfield.....									1										
Sunapee.....																	1		
Unity.....									1										
Washington.....						1			1										
Total.....					8	12	3		8				1		3		4		2

No. 16.—Continued.

Counties, 1913.—International Classification.

VI. DISEASES OF THE GENITO-URINARY SYSTEM AND ITS ADNEXA.											VII. THE PUERPERAL STATE.											
119. Acute nephritis.	120. Bright's disease.	121. Other diseases of the kidneys.	122. Calculi of the urinary tract.	123. Diseases of the bladder.	124. Diseases of the urethra.	125. Diseases of the prostate.	126. Non-venereal diseases of the male genital organs.	127. Metritis.	128. Uterine hemorrhage (non-puerperal).	129. Uterine tumor.	130. Other diseases of the uterus.	131. Cysts and other tumors of the ovary.	132. Other diseases of the female genital organs.	133. Non-puerperal diseases of the breast.	134. Accidents of pregnancy.	135. Puerperal hemorrhage.	136. Other accidents of labor.	137. Puerperal septicemia.	138. Puerperal albuminuria and convulsions.	139. Phlegmasia alba dolens (puerperal).	140. Other puerperal accidents.	141. Puerperal diseases of the breast.
...
...	3	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	11	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	23	...	1	1	...	1	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...

Table

Causes of Death arranged by Towns and

TOWNS IN SULLIVAN COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.		150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Acworth.....												
Charlestown.....	1										2	
Claremont.....									1	9	2	
Cornish.....												
Croydon.....												
Goshen.....												
Grantham.....												
Langdon.....												
Lempster.....												
Newport.....									3	4		
Plainfield.....												
Springfield.....												
Sunapee.....												
Unity.....												
Washington.....												
Total.....	1								4	15	2	

No. 16.—Continued.

Counties, 1913.—International Classification.

XII. OLD AGE.		XIII. EXTERNAL CAUSES.																				XIV. ILL-DEFINED DISEASES.				
154. Senile debility.		155. Suicide by poison.	156. Suicide by asphyxia.	157. Suicide by hanging or strangulation.	158. Suicide by drowning.	159. Suicide by firearms.	160. Suicide by cutting instruments.	161. Suicide by jumping from high places.	162. Suicide by crushing.	163. Other suicides.	164. Fractures.	165. Dislocations.	166. Other accidental traumatisms.	167. Burns and scalds.	168. Burns from corrosive substances.	169. Sunstroke.	170. Freezing.	171. Electric shock.	172. Accidental drowning.	173. Inanition (starvation).	174. Absorption of deleterious gases (non-suicidal).	175. Other acute poisonings.	176. Other external violence.	177. Dropsy.	178. Sudden death.	179. Causes of death unspecified or ill-defined.
2				1									2													
3													2	1												
													1													
2																										
5				1		1							5													
													1							1						
2																										
													1													
14				2			1						12	1						1			1			1

Table

Causes of Death arranged by Towns and

TOWNS IN GRAFTON COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicemia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	25. Pellagra.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.				
Alexandria.....				1																			3	1					
Ashland.....					1				1							1													
Bath.....																							5						
Benton.....																													
Bethlehem.....								1																					
Bridgewater.....																													
Bristol.....									2														3						
Campton.....																													
Canaan.....																													
Dorchester.....				1																									
Easton.....																													
Ellsworth.....				1																									
Enfield.....																							2						
Franconia.....				1			1																						
Grafton.....									1																				
Groton.....																									1				
Hanover.....				1												3							1	1					
Haverhill.....	1						1																						
Hebron.....																													
Holderness.....									1																				
Landaff.....																							1						
Lebanon.....				1							1					1							6	1					
Lincoln.....																													
Lisbon.....				1																									
Littleton.....																2							2		1				
Livermore.....																							1						
Lyman.....																													
Lyme.....						1			1																				
Monroe.....																													
Orange.....				1																									
Orford.....						1																		1					
Piermont.....																													
Plymouth.....	1							1	1							1							1						
Rumney.....																							1						
Thornton.....																								1	1				
Warren.....																													
Waterville.....																													
Wentworth.....	2																						1						
Woodstock.....																													
Total.....	4			8	1	2	2	2	8							8					1		29	5	1				

Table

Causes of Death arranged by Towns and

TOWNS IN GRAFTON COUNTY.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																	
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over)	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.	75. Diseases of the eye.	76. Diseases of the ear.
Alexandria						3												
Ashland						3									1		1	
Bath						1											1	
Benton																		
Bethlehem						2												
Bridgewater																		
Bristol						2		1									2	
Campton								1									1	
Canaan						1												
Dorchester								1										
Easton																		
Ellsworth																		
Enfield				1	4													
Franconia																		
Grafton						2		1										
Groton											1							
Hanover	1					2												
Haverhill				1	6													
Hebron																		
Holderness						2												
Landaff	1																	
Lebanon	1					4												
Lincoln	1																	
Lisbon						3												
Littleton						1											1	
Livermore																		
Lyman																		
Lyme						3												
Monroe								1										
Orange																		
Orford																		
Piermont							1											
Plymouth	1	1		1	1			1			1						2	
Rumney																		
Thornton																		
Warren																		
Waterville																		
Wentworth						1												
Woodstock																		
Total	1	5		1	3	40	1	6		2				1		8		

No. 16.—*Continued.*

Counties, 1913.—International Classification.

III. DISEASES OF THE CIRCULATORY SYSTEM.										IV. DISEASES OF THE RESPIRATORY SYSTEM.												
77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries.	82. Embolism and thrombosis.	83. Diseases of the veins.	84. Diseases of the lymphatic system.	85. Hemorrhages.	86. Other diseases of the circulatory system.	87. Laryngitis.	88. Other diseases of the larynx.	89. Diseases of the thyroid body.	90. Acute bronchitis.	91. Chronic bronchitis.	92. Broncho-pneumonia.	93. Pneumonia.	94. Pleurisy.	95. Congestion and apoplexy of the lungs.	96. Gangrene of the lungs.	97. Asthma.	98. Pulmonary emphysema.	99. Other diseases of the respiratory system.
		2		1											1	3						
		4		1									1			1			1			
		1		2												3			1			
		3																				
		5		1	2																	
			1														2					
																1						
		4		1																		
		2																				
	1	5		7	2	1										2						
		4		3												1						
		2																				
		1																				
		6		2									2				1					
		1																				
		3		1																		
1				1	3								1			2						
	1	4																				

Table

Causes of Death arranged by Towns and

TOWNS IN GRAFTON COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.																		
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhea and enteritis (under 2 years).	106. Diarrhea and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumor of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.	118. Appendicitis.
Alexandria.....							1												
Ashland.....																			
Bath.....																			
Benton.....																			
Bethlehem.....																			
Bridgewater.....																			
Bristol.....					1				1										
Campton.....					3									1					
Canaan.....					4		2				1		1						
Dorchester.....																			
Easton.....																			
Ellsworth.....																			
Enfield.....					1	1	2		1				1						
Franconia.....																			
Grafton.....																			
Groton.....																			
Hanover.....						2								2	2	1		3	2
Haverhill.....					1	1	1			1				1					
Hebron.....																			
Holderness.....																			
Landaff.....						1													
Lebanon.....					1	2	1		1										
Lincoln.....											1								
Lisbon.....						2	3							1					1
Littleton.....					3	1			1	1							4		1
Livermore.....																			
Lyman.....										1									
Lyme.....																			
Monroe.....							1												
Orange.....																			
Orford.....							1												
Piermont.....																			
Plymouth.....				1		1													1
Rumney.....													1						
Thornton.....																			
Warren.....					1														
Waterville.....																			
Wentworth.....													1						
Woodstock.....																			
Total.....			1	15	11	12			4	4	1		7	4	1		7		5

Table

Causes of Death arranged by Towns and

TOWNS IN GRAFTON COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.		150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Alexandria												
Ashland										2		
Bath									1			
Benton												
Bethlehem												
Bridgewater												
Bristol				1							1	
Campton									1			
Canaan	1											
Dorchester												
Easton												
Ellsworth												
Enfield									1			
Franconia												
Grafton												
Groton												
Hanover	1			1	1				1	4		
Haverhill	1			1					2	2		
Hebron												
Holderness												
Landaff												
Lebanon									2	8		
Lincoln									1	1		
Lisbon										2		
Littleton										1		
Livermore												
Lyman												
Lyme										1		
Monroe	1											
Orange										1		
Orford												
Piermont	1											
Plymouth										1		
Rumney									1	2		
Thornton												
Warren										2		
Waterville												
Wentworth										1		
Woodstock										2		
Total	5			3	1				10	30	1	

No. 16.—Continued.

Counties, 1913.—International Classification.

XII. OLD AGE.		XIII. EXTERNAL CAUSES.																				XIV. ILL-DEFINED DISEASES.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
154. Senile debility.		155. Suicide by poison.		156. Suicide by asphyxia.		157. Suicide by hanging or strangulation.		158. Suicide by drowning.		159. Suicide by firearms.		160. Suicide by cutting instruments.		161. Suicide by jumping from high places.		162. Suicide by crushing.		163. Other suicides.		164. Fractures.		165. Dislocations.		166. Other accidental traumatisms.		167. Burns and scalds.		168. Burns from corrosive substances.		169. Sunstroke.		170. Freezing.		171. Electric shock.		172. Accidental drowning.		173. Inanition (starvation).		174. Absorption of deleterious gases (non-suicidal).		175. Other acute poisonings.		176. Other external violence.		177. Dropsy.		178. Sudden death.		179. Causes of death unspecified or ill-defined.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
1	2																							1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

Table

Causes of Death arranged by Towns and

TOWNS IN COÖS COUNTY.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicemia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.					
Berlin.....	2		5		2	4	1							1								5	1						
Carroll.....																						1							
Clarksville.....																													
Colebrook.....																1						1		1					
Columbia.....																													
Dalton.....																													
Dummer.....																													
Errol.....																													
Gorham.....			2																			2	1						
Jefferson.....																													
Lancaster.....																1						3							
Milan.....	1																												
Millsfield.....																													
Northumberland.....							1															5							
Pittsburg.....																													
Randolph.....																													
Shelburne.....																													
Stark.....						1																							
Stewartstown.....																						2							
Stratford.....																1						1							
Whitefield.....																						2		1					
Total.....	3		7		3	5	1							1	3						22	2	2						

No. 16.—*Continued.*

Counties, 1913.—International Classification.

I. GENERAL DISEASES.—*Continued.*

30. Pott's disease.	31. Cold abscess, abscess by congestion.	32. White swelling.	33. Tuberculosis of other organs.	34. General tuberculosis.	35. Scrofula.	36. Syphilis.	37. Gonorrhea (5 years and over).	38. Gonorrhea (under 5 years).	39. Cancer and other malignant tumors of the buccal cavity.	40. Cancer of stomach and liver.	41. Cancer of intestines.	42. Cancer of genital organs.	43. Cancer of breast.	44. Cancer of skin.	45. Cancer of other or unspecified organs.	46. Tumors.	47. Acute articular rheumatism.	48. Chronic rheumatism and gout.	49. Scurvy.	50. Diabetes.	51. Exophthalmic goiter.	52. Addison's disease.	53. Leukemia.	54. Anemia, chlorosis.	55. Other general diseases.	56. Acute and chronic alcoholism.	57. Chronic lead poisoning.	58. Other chronic poisonings.
..	1	..	1	..	..	2	..	1	..	..	..	..	..	1	..	..	..	..	..
..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
..	1	3	..	1	..	..	1	..	1	..	..	1	..	..	..	1	..	..	1	..
..
..	1	1	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..
..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	..
..	1	1	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..
..	1	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..
..	1	8	4	4	1	1	3	..	3	..	..	3	..	1	5	..	2	1	..	..

Table

Causes of Death arranged by Towns and

TOWNS IN COÖS COUNTY.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																	
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.	75. Diseases of the eye.	76. Diseases of the ear.
Berlin.....	5			2	1	7		1					2					
Carroll.....																		
Clarksville.....																		
Colebrook.....						3					1							
Columbia.....																		
Dalton.....																		
Dummer.....																		
Errol.....							2											
Gorham.....						2		2										
Jefferson.....	1																	
Lancaster.....	1					3		2			1					1		
Milan.....																		
Millsfield.....																		
Northumberland.....							2											
Pittsburg.....																		
Randolph.....																		
Shelburne.....																		
Stark.....							1											
Stewartstown.....					1	2				1								
Stratford.....						1		1										
Whitefield.....					1					1	1							
Total.....	7			2	3	23		6		2	3		2			1		

No. 16.—Continued.

Counties, 1913.—International Classification.

III. DISEASES OF THE CIRCULATORY SYSTEM.										IV. DISEASES OF THE RESPIRATORY SYSTEM.												
77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries.	82. Embolism and thrombosis.	83. Diseases of the veins.	84. Diseases of the lymphatic system.	85. Hemorrhages.	86. Other diseases of the circulatory system.	87. Laryngitis.	88. Other diseases of the larynx.	89. Diseases of the thyroid body.	90. Acute bronchitis.	91. Chronic bronchitis.	92. Broncho-pneumonia.	93. Pneumonia.	94. Pleurisy.	95. Congestion and apoplexy of the lungs.	96. Gangrene of the lungs.	97. Asthma.	98. Pulmonary emphysema.	99. Other diseases of the respiratory system.
.....	1	9	.....	1	.....	.....	.....	1	.....	.....	.....	.....	5	1	16	25	.....	.....	.....	.....	2	.....
.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
.....	1	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	4	.....	.....	.....	.....	.....	1
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	4	1	.....	.....	.....	.....	.....	.....	.....	1	.....	3	.....	3	3	.....	1	.....	.....	.....	.....
.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....	.....	.....	.....	.....	.....
.....	2	.....	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	4	1	1	.....	.....	.....	.....
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....	.....	.....	.....	.....
.....
.....	1	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	5	.....	.....	.....	.....	.....	.....
.....
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	1	.....	.....	.....	.....	.....	.....
.....	1	8	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	4	.....	.....	.....	.....	.....	.....
.....	3	42	2	9	3	.....	1	.....	.....	.....	1	.....	8	3	26	50	1	.....	3	.....	2	.....

Table

Causes of Death arranged by Towns and

TOWNS IN COÖS COUNTY.	V. DISEASES OF THE DIGESTIVE SYSTEM.																		
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhoea and enteritis (under 2 years).	106. Diarrhoea and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.	118. Appendicitis.
Berlin.....					2	12							1				3		1
Carroll.....																			
Clarksville.....																			
Colebrook.....													2		1				
Columbia.....					1														
Dalton.....																			
Dummer.....																			
Errol.....																			
Gorham.....					1	2	1							1					
Jefferson.....																			
Lancaster.....			1														1		
Milan.....							1												
Millsfield.....															1				
Northumberland.....									1										
Pittsburg.....																			
Randolph.....																			
Shelburne.....																			
Stark.....																			
Stewartstown.....					1				1				1						
Stratford.....						1	1										1		
Whitefield.....																	1		
Total.....			1		5	15	3		2				4	1	2		6		1

Table

Causes of Death arranged by Towns and

TOWNS IN COÖS COUNTY.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.		150. Congenital malformations.	151. Congenital debility, icterus and sclerema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Berlin			1						2	22	1	
Carroll												
Clarksville												
Colebrook									2	1		
Columbia									1			
Dalton										1		
Dummer										1		
Errol												
Gorham									2	3		
Jefferson												
Lancaster	1									3		
Milan										2		
Millsfield												
Northumberland										2		
Pittsburg												
Randolph												
Shelburne									1			
Stark										1		
Stewartstown										1		
Stratford										1		
Whitefield	1	1										
Total	2	1	1						8	38	1	

No. 16.—Continued.

Counties, 1913.—International Classification.

XII. OLD AGE.		XIII. EXTERNAL CAUSES.																				XIV. ILL-DEFINED DISEASES.				
154. Senile debility.	155. Suicide by poison.	156. Suicide by asphyxia.	157. Suicide by hanging or strangulation.	158. Suicide by drowning.	159. Suicide by firearms.	160. Suicide by cutting instruments.	161. Suicide by jumping from high places.	162. Suicide by crushing.	163. Other suicides.	164. Fractures.	165. Dislocations.	166. Other accidental traumatisms.	167. Burns and scalds.	168. Burns from corrosive substances.	169. Sunstroke.	170. Freezing.	171. Electric shock.	172. Accidental drowning.	173. Inanition (starvation).	174. Absorption of deleterious gases (non-suicidal).	175. Other acute poisonings.	176. Other external violence.	177. Dropsy.	178. Sudden death.	179. Causes of death unspecified or ill-defined.	
3						1						8			1			3			1			1		4
												2								1						
5												1											1			
1																										2
						1																				1
3												3														1
																										1
2																										
																										1
																										1
3	1											1														
												1														
17	1				1	1						16			1			3		1		2	1	1		11

Table
Recapitulation

COUNTIES.	I. GENERAL DISEASES.																												
	1. Typhoid fever.	4. Malarial fever.	5. Smallpox.	6. Measles.	7. Scarlet fever.	8. Whooping cough.	9. Diphtheria.	9a. Membranous croup.	10. Influenza.	11. Miliary fever.	13. Cholera nostras.	14. Dysentery.	14a. Epidemic dysentery.	18. Erysipelas.	19. Other epidemic diseases.	20. Purulent infection and septicemia.	21. Glanders and farcy.	22. Malignant pustule.	23. Rabies.	24. Actinomycosis, trichinosis, etc.	25. Pellagra.	26. Tuberculosis of the larynx.	27. Tuberculosis of the lungs.	28. Tubercular meningitis.	29. Abdominal tuberculosis.				
Rockingham.....	7			6	1	2	5	2	5			2		1		4						1	48	5	2				
Strafford.....	9		1	4		2	8	2	3		1			1		1							41	5	1				
Belknap.....				5		5			6		1												14	3					
Carroll.....	3								8														13						
Merrimack.....	5			12		5	5	1	9			4		5		1					1		62	2	3				
Hillsborough.....	10		1	7	8	4	19	6	8			2		2		5	1					2	155	22	12				
Cheshire.....	7			2	3	1		1	3		1	2				1			1				24	1	2				
Sullivan.....	2			4			1		1		1			2									17	2	1				
Grafton.....	4			8	1	2	2	2	8							8					1		29	5	1				
Coös.....	3			7		3	5	1						1		3							22	2	2				
Total.....	50		2	55	13	24	45	15	51		4	10		12		23	1		1		2	3	425	47	24				

No. 16.—Continued.

by Counties, 1913.

I. GENERAL DISEASES.—Continued.

30. Pott's disease.	31. Cold abscess, abscess by congestion.	32. White swelling.	33. Tuberculosis of other organs.	34. General tuberculosis.	35. Scrofula.	36. Syphilis.	37. Gonorrhea (5 years and over).	38. Gonorrhea (under 5 years).	39. Cancer and other malignant tumors of the buccal cavity.	40. Cancer of stomach and liver.	41. Cancer of intestines.	42. Cancer of genital organs.	43. Cancer of breast.	44. Cancer of skin.	45. Cancer of other or unspecified organs.	46. Tumors.	47. Acute articular rheumatism.	48. Chronic rheumatism and gout.	49. Scurvy.	50. Diabetes.	51. Exophthalmic goiter.	52. Addison's disease.	53. Leukemia.	54. Anemia, chlorosis.	55. Other general diseases.	56. Acute and chronic alcoholism.	57. Chronic lead poisoning.	59. Other chronic poisonings.
...	...	1	...	1	...	1	...	...	1	24	6	9	7	3	8	...	5	...	14	...	...	1	7	...	4	...	...	...
...	2	21	5	7	5	...	3	...	3	...	7	...	1	...	4	...	6	...	...	...
...	2	...	...	...	...	1	7	3	1	3	1	3	...	1	1	...	5	...	2	...	5	1	...	1	1
...	1	...	...	...	...	...	...	11	5	3	1	1	1	...	...	...	3	...	...	2	3	...	...	...	...	...
...	3	1	...	...	...	...	2	22	13	10	5	7	9	...	8	...	7	1	1	1	1	8	8	5	1	...
5	1	...	4	...	...	...	5	39	21	20	11	3	23	1	14	1	...	24	1	...	2	29	1	5	...	...
...	1	13	5	7	2	...	4	...	1	...	9	...	...	1	4	...	2	1	...	...
...	1	10	5	1	4	2	1	...	2	...	1	...	...	...	...	2	...	...	...	...
1	3	...	1	...	...	1	17	7	5	1	2	10	2	1	2	...	9	...	...	1	6	...	3	...	...
...	1	8	4	4	1	1	3	...	3	...	3	...	...	1	5	...	2	1	...	...
6	...	1	5	5	2	6	...	...	15	172	74	67	40	20	65	3	38	4	...	82	2	4	9	71	10	29	4	1

Table
Recapitulation

COUNTIES.	II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																		
	60. Encephalitis.	61. Simple meningitis.	61a. Epidemic cerebro-spinal meningitis.	62. Locomotor ataxia.	63. Other diseases of the spinal cord.	64. Apoplexy.	65. Softening of the brain.	66. Paralysis without specified cause.	67. General paralysis.	68. Other forms of mental alienation.	69. Epilepsy.	70. Convulsions (non-puerperal; 5 years and over).	71. Convulsions (under 5 years).	72. Tetanus.	73. Chorea.	74. Other diseases of the nervous system.	75. Diseases of the eye.	76. Diseases of the ear.	
Rockingham.....		12	1	1	10	58	1	17	1	1	1	9	2						
Strafford.....	1	12		1	4	41	3	12		1	2	6							
Belknap.....		2			4	22		13	1	1	2								
Carroll.....						27	1	2		1						1			
Merrimack.....	1	8		1	5	94		12	6	18	12	2				5			
Hillsborough.....	1	40	1	5	21	133	1	19		4	2	12	1	8					
Cheshire.....		7			1	39	1	4		6	2								
Sullivan.....		1		1	1	10	1	2				1	1	2					
Grafton.....	1	5		1	3	40	1	6		2			1	8					
Coös.....		7		2	3	23		6		2	3	2		1					
Total.....	4	94	2	12	52	487	9	93	8	25	30	30	2	1	33				

No. 16.—Continued.

by Counties, 1913.

III. DISEASES OF THE CIRCULATORY SYSTEM.										IV. DISEASES OF THE RESPIRATORY SYSTEM.												
77. Pericarditis.	78. Acute endocarditis.	79. Organic diseases of the heart.	80. Angina pectoris.	81. Diseases of the arteries.	82. Embolism and thrombosis.	83. Diseases of the veins.	84. Diseases of the lymphatic system.	85. Hemorrhages.	86. Other diseases of the circulatory system.	87. Laryngitis.	88. Other diseases of the larynx.	89. Diseases of the thyroid body.	90. Acute bronchitis.	91. Chronic bronchitis.	92. Broncho-pneumonia.	93. Pneumonia.	94. Pleurisy.	95. Congestion and apoplexy of the lungs.	96. Gangrene of the lungs.	97. Asthma.	98. Pulmonary emphysema.	99. Other diseases of the respiratory system.
4	4	80	14	18	3								4	6	10	61	8			4		
2	3	80	7	15	1		1						4	6	21	43	1	3		2		
.....	1	42	4	10	3		2			1			5	3	10	30	2					1
.....	1	35	1	17	6								6	2	3	26	2					
3	3	122	10	38	9	1	2						5	11	18	86	3	10		1		1
3	29	223	18	78	9		3		2	2	2		27	16	60	122	8	15	1	2		
.....	5	56	8	38	3				1				4	6	11	51	1					
3	1	39	3	21									1	4	6	24	1	1		1		
1	4	58	1	31	9	1			1	1			8		12	63	2	8				
.....	3	42	2	9	3		1			1			8	3	26	50	1	3		2		1
16	54	777	68	275	46	2	9		4	4	3		72	57	186	556	18	51	1	12		3

Table
Recapitulation

COUNTIES.	V. DISEASES OF THE DIGESTIVE SYSTEM.																		
	100. Diseases of the mouth.	101. Diseases of the pharynx.	102. Diseases of the esophagus.	103. Ulcer of the stomach.	104. Other diseases of the stomach.	105. Diarrhea and enteritis (under 2 years).	106. Diarrhea and enteritis (2 years and over).	107. Intestinal parasites.	108. Hernia and intestinal obstructions.	109. Other diseases of the intestines.	110. Acute yellow atrophy of the liver.	111. Hydatid tumors of the liver.	112. Cirrhosis of the liver.	113. Biliary calculi.	114. Other diseases of the liver.	115. Diseases of the spleen.	116. Simple peritonitis.	117. Other diseases of the digestive system.	118. Appendicitis.
Rockingham.....	1	2	19	18	12	7	2	7	2	4	2	1	8	1	1	1	1	1	1
Strafford.....	2	8	31	3	7	2	7	2	4	2	2	2	2	3	3	3	3	3	3
Belknap.....	1	3	11	12	4	5	5	2	1	1	1	1	1	2	2	2	2	2	2
Carroll.....	1	11	9	5	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1
Merrimack.....	3	9	39	16	15	1	15	1	5	1	5	1	7	1	5	2	2	2	2
Hillsborough.....	1	2	37	229	22	22	22	5	19	4	5	19	1	16	16	16	16	16	16
Cheshire.....	1	12	16	7	2	1	2	1	6	1	6	1	2	4	4	4	4	4	4
Sullivan.....	8	12	3	8	8	8	8	8	1	3	4	2	2	2	2	2	2	2	2
Grafton.....	1	15	11	12	4	4	4	4	1	7	4	1	7	5	5	5	5	5	5
Coös.....	1	5	15	3	2	2	2	2	4	1	2	6	1	1	1	1	1	1	1
Total.....	5	14	135	392	87	74	13	1	52	10	23	2	56	1	36	36	36	36	36

No. 16.—Continued.

by Counties, 1913.

VI. DISEASES OF THE GENITO-URINARY SYSTEM AND ITS ADNEXA.														VII. THE PUERPERAL STATE.									
119. Acute nephritis.	120. Bright's disease.	121. Other diseases of the kidneys.	122. Calculi of the urinary tract.	123. Diseases of the bladder.	124. Diseases of the urethra.	125. Diseases of the prostate.	126. Non-venereal diseases of the male genital organs.	127. Metritis.	128. Uterine hemorrhage (non-puerperal).	129. Uterine tumor.	130. Other diseases of the uterus.	131. Cysts and other tumors of the ovary.	132. Other diseases of the female genital organs.	133. Non-puerperal diseases of the breast.	134. Accidents of pregnancy.	135. Puerperal hemorrhage.	136. Other accidents of labor.	137. Puerperal septicemia.	138. Puerperal albuminuria and convulsions.	139. Phlegmasia alba dolens (puerperal).	140. Other puerperal accidents.	141. Puerperal diseases of the breast.	
2	61	1	2							1									1				
7	48	2	1	1						2						1	1						
3	22	1	2												2								
...	17								1		1										1		
7	55	1	4	1						1					2				4		1		
12	114	6	2	11	2			2	1				1	5	2		1	15			1		
2	23	1								2					2			1	1				
3	23		1	1	1								1					1					
7	41	2	1	3	1					2		1		1				3	1				
1	16			1	2		1			1				2		1		3					
44	420	14	4	25	8		1	3	7	3	2	2		14	3	2	6	25			3		

Table
Recapitulation

COUNTIES.	VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.				IX. DISEASES OF THE ORGANS OF LOCOMOTION.				X. MALFORMA- TIONS.	XI. EARLY INFANCY.		
	142. Gangrene.	143. Carbuncle.	144. Acute abscess, phlegmon.	145. Other diseases of the skin.	146. Diseases of the bones.	147. Diseases of the joints.	148. Amputation.	149. Other diseases of the organs of locomotion.		150. Congenital malformations.	151. Congenital debility, icterus and scierema.	152. Other diseases peculiar to early infancy.	153. Lack of care.
Rockingham.....	2				1				7	42	10	....
Strafford.....	3	1		2					3	34	4	....
Belknap.....			1						1	14	7	....
Carroll.....	1	1							2	10	2	....
Merrimack.....	7	1	1		1				5	45	3	....
Hillsborough.....	8		2		3				24	157	14	....
Cheshire.....	4				1				8	16	2	....
Sullivan.....	1								4	15	2	....
Grafton.....	5			3	1				10	30	1	....
Coös.....	2	1	1						8	38	1	....
Total.....	33	4	5	5	7				72	401	46	....

No. 16.—*Concluded.*

by Counties, 1913.

XII. Old Age.		XIII. EXTERNAL CAUSES.																								XIV. ILL-DEFINED DISEASES.																									
154. Senile debility.		155. Suicide by poison.		156. Suicide by asphyxia.		157. Suicide by hanging or strangulation.		158. Suicide by drowning.		159. Suicide by firearms.		160. Suicide by cutting instruments.		161. Suicide by jumping from high places.		162. Suicide by crushing.		163. Other suicides.		164. Fractures.		165. Dislocations.		166. Other accidental traumatism.		167. Burns and scalds.		168. Burns from corrosive substances.		169. Sunstroke.		170. Freezing.		171. Electric shock.		172. Accidental drowning.		173. Inanition (starvation).		174. Absorption of deleterious gases (non-suicidal).		175. Other acute poisonings.		176. Other external violence.		177. Dropsy.		178. Sudden death.		179. Causes of death unspecified or ill-defined.	
34	2	..	6	2	1	22	6	10	1	1	5	1	2								
21	2	..	1	..	2	11	2	2	5	4	3	2								
28	1	1	8	4	1	5	1	2	6							
13	1	3	..	1	6	2	2	1								
46	..	2	5	..	2	2	1	21	1	7	..	2	5	1	1	5								
64	6	4	5	2	8	5	1	1	38	12	..	1	1	16	..	5	2	5	..	1	38								
9	1	3	1	11	4	6	4	1	6									
14	2	1	12	1	1	1	1	1								
50	1	1	1	1	19	6	5	1	..	1	..	1	7									
17	1	1	1	16	..	1	..	3	..	1	2	..	1	1	..	1	1	11									
296	10	6	18	4	23	12	3	..	1	..	161	36	..	3	1	3	64	1	9	27	15	9	3	72								

Table No. 17.
Deaths by Ages, Sex and Months, by Counties and Towns, 1913.
(Not including still births.)

TOWNS IN ROCKINGHAM COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Atkinson.....	Males.....	1				1			1	1	2	2				1	2	2			1		2					2	9
	Females.....										1	1											1					7	
Auburn.....	Males.....	1						1			5				1		2		1				2		1			7	9
	Females.....										1	1				1												2	
Brentwood.....	Males.....	2					3	4	5	5	1				1	1	2	2		1	1	4	3	2	2	1		20	35
	Females.....					1	2	1	2	2	3	4			1	1	3	1	1		1	2	1	3		1		15	
Candia.....	Males.....	1							2	2	2					1	1	1		2								7	14
	Females.....	1				1				1	4					1			1	1				1				7	
Chester.....	Males.....	1								2	2				1	1	1						1			1		5	11
	Females.....	1				1					3	1			1				1				1		2	1		6	
Danville.....	Males.....											2								1		1					2	6	
	Females.....								1			2	1							1			1	2			4		
Deerfield.....	Males.....	1	1				1			3		1					1			1	1	1	1		1		7	12	
	Females.....		1							1	1	2			2	1			1								5		
Derry.....	Males.....	10	1	1		1		4	1	6	6	5	2		6	4	3	2	1	2	5	5	1	3	1	4		37	78
	Females.....	10	4	1	2	1		1	3	12	7	1			3	3	3	8	4	5		2	1	1	2	4		41	
East Kingston	Males.....							1	1	1	1						1		2					1	1			5	11
	Females.....					1					2	1		1	1	3	1	1				1					6		

[illegible]

[illegible]TOWNS IN
STRAFFORD COUNTY.[illegible]

Table No. 17.—1913.—Continued.

TOWNS IN BELKNAP COUNTY.	Under 1.												Grand total.
	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	
Alton.....	1 1	1 1	1 1	1 1	1 3	1 2	1 3	2 3	2 3	3 2	3 2	1 1	25
Males.....	1 1	1 1	1 1	1 1	1 3	1 2	1 3	2 3	2 3	3 2	3 2	1 1	12
Females.....	1 1	1 1	1 1	1 1	1 3	1 2	1 3	2 3	2 3	3 2	3 2	1 1	13
Barnstead.....	3 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	27
Males.....	3 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	13
Females.....	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	14
Belmont.....	1 3	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	20
Males.....	1 3	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	10
Females.....	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	10
Center Harbor.....	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	6
Males.....	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	3
Females.....	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	3
Gilford.....	2 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	17
Males.....	2 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	6
Females.....	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	11
Gilmanton.....	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	13
Males.....	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	10
Females.....	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	3
Laconia.....	19 6 1	6 3 4	10 10 10	17 17 17	9 9 9	6 6 6	6 6 6	6 6 6	6 6 6	6 6 6	6 6 6	6 6 6	95
Males.....	19 6 1	6 3 4	10 10 10	17 17 17	9 9 9	6 6 6	6 6 6	6 6 6	6 6 6	6 6 6	6 6 6	6 6 6	84
Females.....	11 6 1	3 2 2	6 6 6	11 11 11	3 3 3	3 3 3	3 3 3	3 3 3	3 3 3	3 3 3	3 3 3	3 3 3	179
Meredith.....	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	36
Males.....	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	17
Females.....	2 2 2	2 2 2	2 2 2	2 2 2	2 2 2	2 2 2	2 2 2	2 2 2	2 2 2	2 2 2	2 2 2	2 2 2	19
New Hampton.....	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	15
Males.....	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	7
Females.....	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	8
Sanbornton.....	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	9
Males.....	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	3
Females.....	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	6
Tilton.....	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	22
Males.....	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	2 1 1	11
Females.....	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	11
Total.....	29 13 2	8 7 9	13 13 13	16 16 16	37 37 37	31 31 31	29 29 29	3 3 3	3 3 3	3 3 3	3 3 3	3 3 3	380
Males.....	29 13 2	8 7 9	13 13 13	16 16 16	37 37 37	31 31 31	29 29 29	3 3 3	3 3 3	3 3 3	3 3 3	3 3 3	198
Females.....	19 8 1	6 6 6	19 19 19	20 20 20	45 45 45	45 45 45	36 36 36	3 3 3	3 3 3	3 3 3	3 3 3	3 3 3	182

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REGISTRATION REPORT.

Table No. 17.—1913.—Continued.

TOWNS IN MERRIMACK COUNTY. —Continued.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Boscawen.	Males.	2				1		2	2	6	8	2	1	1	5	1	1	3			3	1	2	4	2	2		26	42
	Females.		1	1		1		1	3	1	2	5	1	1	3	1	1	1	2			1		2	2	2		16	
Bow.	Males.							1										1				1	1				7	19	
	Females.		1	2						2	4	2	1		1				2	2	2	1	1	4	1		12		
Bradford.	Males.								1	1	1	1				2	1				1						4	9	
	Females.									2	2	1			3		1							1			5		
Canterbury.	Males.							1	1	2		1						1	1		2		1		1		5	12	
	Females.								3	3	2	1	1		2	1		1		1							7		
Chichester.	Males.	1							1		1	1			1	1		1	2			1					3	9	
	Females.								1	1	2	1													1		6		
Concord.	Males.	30	9	8	3	15	24	22	40	53	44	23	3	1	26	18	14	21	27	23	23	23	29	19	23	29	275	500	
	Females.	22	10	1	6	15	20	21	20	35	38	29	8		25	17	22	19	19	13	24	12	17	17	18	22	225		
Danbury.	Males.			1					1		4			1		2		1	1	1	1		1				7	10	
	Females.	1			1						1	1				1			1						1		3		
Dunbarton.	Males.									1		2	1					1	1					1			4	6	
	Females.								1				1						1				1		2		2		
Epsom.	Males.							2			3	1							1	2				1			4	11	
	Females.										4		1		1				1	1		1	1	2	1		7		
Franklin.	Males.	12	7	1	1	4	1	4	4	3	6	4		1	4	2	7	7	4	2	3	4	4	3	3	5	48	94	
	Females.	11	1	1	1	6	3	7	5	5	5	5			4	3	2	4	4	3	1	2	5	4	10	4	46		
Henniker.	Males.	2						1		3	3										2	1	2	1	2	1	9	19	
	Females.	2								1	3	2			2	2				1	1		1		2		10		

[illegible]

REGISTRATION REPORT.

Table No. 17.—1913.—Continued.

TOWNS IN HILLSBOROUGH COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Amherst.	Males.	1					2	3	3	1	1	2						1	2	1	1		2			4			10	16
	Females.				1			1	2								1	1	1				2		1	1			6	
Antrim.	Males.	5					1	1	1			2						1	2	1	1	1			2	1			9	20
	Females.	2			3	1				1	1	2			1			3	1	1	2		1		1	2			11	
Bedford.	Males.							2	3	1	1	1	1			1	1	1	1	1		1		1	2	1			7	19
	Females.		1	2					4	4	1	1				1	1	2	2	1			1		1	1			12	
Bennington.	Males.	1					1	1	1	1	2	1					1		1	1	1		1			2			5	10
	Females.		1	1			2				1						1	1	1	1				2					5	
Brookline.	Males.	1							1	1	1	2				1	1		1	1	1		1						5	9
	Females.		1	1			1					2				1	1		1	1	1	1				1			4	
Deering.	Males.							1	1	1	3	2					1	1				2		1	1				4	11
	Females.										4	2				1		1	1						1	1			7	
Francesstown.	Males.						1		1	1	1	2						1				2		1		1			5	7
	Females.										2										1								2	
Goffstown.	Males.	8	2	1	5	10	3	9	9	17	19	6				1	5	9	8	5	8	9	4	6	8	12	10		90	156
	Females.	3		5	7	9	5	8	8	9	11	8			1	6	6	6	5	6	9	8	4	3	1	9	3		66	
Greenfield.	Males.	1							1											1		1					1		2	5
	Females.									2		1				1	1		1	1									3	
Greenville.	Males.	1	1	1			1		4	1	1	2				2		1	2	2			2	1	1		2		11	21
	Females.	1			2			1	1	1	1	3					1				2	1							10	

[illegible]

Table No. 17.—1913.—Continued.

TOWNS IN HILLSBOROUGH COUNTY. —Continued.		Under 1.		1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
				1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	
Pelham.	Males.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	11	
	Females.																												6		
Peterborough.	Males.	4	1	1	1	1	1	1	3	1	1	3	3	1	2	2	2	1	2	2	2	2	1	1	1	2	3	3	16	31	
	Females.	2							2	2	3	5	1	1	1	1	3	2	3	1	1	1			1	1	4	15			
Sharon.	Males.																														
Females.																															
Temple.	Males.		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	6		
	Females.																											3			
Weare.	Males.	1	1	1	3	1	2	2	1	1	2	3	3	3	3	3	1	1	1	2	2	2	1	2	1	1	2	13	18		
	Females.	1					1	1			1	2	2	2	2	2	1	1	1	2	2	1	2				5				
Wilton.	Males.		1	1	1	1	1	1	3	1	3	1	1	1	1	1	1	1	2	2	2	2	1	2	1	1	1	9	24		
	Females.	2		1	2		4				4	3	3	3	3	2	1	1	1	4		2	1	1			15				
Windsor.	Males.																														
Females.																															
Total.	Males.	322	83	29	39	50	65	100	119	138	146	80	7	1	5	112	112	87	94	87	100	110	130	100	74	79	99	1184	2330		
	Females.	261	62	17	36	69	92	75	93	132	165	123	15	1	5	112	92	93	78	91	90	117	117	88	70	104	94	1146			

Table No. 17.—1913.—Continued.

TOWNS IN CHESHIRE COUNTY.	DEATHS.														Grand total.
	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	
Alstead.	Males.	1					1	1	1	2	1			1	7
	Females.	1				1		1						2	5
Chesterfield.	Males.	1				1			2	5	2			1	11
	Females.	1				1	1		2	1				2	6
Dublin.	Males.	1						1							1
	Females.	1						1	1		1			1	4
Fitzwilliam.	Males.	1				1									2
	Females.	1						1	1	1	2			1	6
Gilsum.	Males.						1	1	1	1	1				4
	Females.						1	1	1	1					3
Harrisville.	Males.	1		1					1						3
	Females.	5		1				1	1	1	1			1	8
Hinsdale.	Males.	4				4		1	3	2	1			1	16
	Females.	3						1	1		5				10
Jaffrey.	Males.	4				1			2	2	4	1			17
	Females.	4				2	2	1		2	2			2	11
Keene.	Males.	13	1	3	8	6	10	14	15	20	11	1	1	5	103
	Females.	10	3	6	3	6	9	9	14	20	12			4	89
Marlborough.	Males.	5	2			1			1	1				1	11
	Females.	2	1						1	4	1			1	10
Marlow.	Males.					1			1						3
	Females.	1		1	1	1	0	1	1	2					6
Nelson.	Males.					1				1				1	2
	Females.							1	1	2					3

Bath.....	Males.....	1	1	3	3	1	1	1	1	2	1	1	1	2	2	1	1	9
Females.....	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8
Benton.....	Males.....	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2
Females.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
Bethlehem.....	Males.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8
Females.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4
Bridgewater.....	Males.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Females.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4
Bristol.....	Males.....	1	1	3	2	7	3	3	1	2	1	1	1	4	1	3	4	18
Females.....	1	1	4	2	3	2	1	1	2	1	1	1	1	1	1	1	2	17
Campton.....	Males.....	1	1	1	2	2	2	2	1	1	1	1	1	2	1	1	1	4
Females.....	2	1	1	2	2	2	2	2	1	1	1	1	1	1	1	1	1	8
Canaan.....	Males.....	2	2	1	3	2	3	1	1	1	1	1	1	1	1	1	2	8
Females.....	1	1	3	3	2	2	1	1	1	1	1	1	1	1	1	1	2	10
Dorchester.....	Males.....	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2
Females.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Easton.....	Males.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Females.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ellsworth.....	Males.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Females.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Enfield.....	Males.....	1	1	2	2	2	2	2	2	1	1	1	1	1	1	1	2	10
Females.....	1	1	1	2	3	2	2	2	2	1	1	1	1	2	1	2	2	10
Franconia.....	Males.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5
Females.....	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	6
Grafton.....	Males.....	1	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	4
Females.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4
Groton.....	Males.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
Females.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3

[illegible]

REGISTRATION REPORT.

Table No. 17.—1913.—Continued.

TOWNS IN COÖS COUNTY.	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.	
Berlin... Males.....	41	12	3	4	6	4	5	7	5	6	...	...	...	1	8	7	9	15	2	7	3	10	11	7	6	9	...	94	182
Females.....	25	13	4	4	3	6	12	7	6	2	6	...	...	...	8	8	10	7	10	5	6	6	8	5	11	4	...	88	
Carroll... Males.....	1	1	...	...	...	...	3	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	1	1	...	...	...	5	9
Females.....	...	...	...	...	...	...	...	...	1	2	1	...	...	...	1	...	...	1	1	...	...	...	1	1	...	...	...	4	
Clarksville... Males.....	
Females.....	
Colebrook... Males.....	3	1	1	2	...	...	1	...	4	2	3	...	...	...	2	1	1	6	2	...	...	2	1	1	1	1	...	17	35
Females.....	2	...	2	3	1	3	1	2	2	3	3	...	...	...	1	3	1	1	2	3	4	...	1	1	2	...	18		
Columbia... Males.....	1	...	...	...	...	...	1	1	...	...	...	...	...	...	...	2	...	...	...	...	...	...	2	1	...	...	...	3	7
Females.....	...	...	...	...	...	...	1	2	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	4	
Dalton... Males.....	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	1	1	...	...	...	...	...	1	4
Females.....	1	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	3	
Dummer... Males.....	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	2	2
Females.....	
Errol... Males.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	4
Females.....	...	...	...	...	...	...	...	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	...	3	
Gorham... Males.....	7	3	...	...	1	1	1	1	...	2	1	...	...	1	...	1	3	3	4	...	...	3	1	...	1	1	...	17	39
Females.....	3	1	...	2	1	3	...	1	...	7	4	...	...	...	...	3	3	...	1	4	...	2	1	1	2	5	...	22	

[illegible]

Table

Recapitulation, Deaths by Ages, Sex

COUNTIES.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.
Rockingham . . .	Males	56	19	5	1	21	23	38	38	67	77	39
	Females	60	22	7	8	12	16	28	40	49	83	72
	Not stated											
Strafford	Males	50	11	6	5	11	20	27	37	61	44	22
	Females	48	30	12	15	10	19	20	35	52	57	35
	Not stated											
Belknap	Males	29	13	2	8	7	9	13	16	37	31	29
	Females	19	8	1	6	6	6	19	13	20	45	36
	Not stated											
Carroll	Males	28	1	1	3	5	5	8	16	17	34	28
	Females	16	4			3	9	10	18	18	31	20
	Not stated											
Merrimack	Males	75	19	10	10	23	33	48	64	90	107	59
	Females	59	19	5	9	29	35	37	45	70	103	71
	Not stated											
Hillsborough	Males	322	83	29	39	50	65	100	119	138	146	80
	Females	261	62	17	36	69	92	75	93	132	165	123
	Not stated											
Cheshire	Males	42	16	2	4	17	16	13	27	45	49	33
	Females	37	15	3	10	10	5	14	22	29	47	37
	Not stated											
Sullivan	Males	29	2	1	5	7	9	10	19	19	41	28
	Females	16	4	3	2	4	10	12	8	14	28	26
	Not stated											
Grafton	Males	35	13	7	10	16	13	17	44	54	81	40
	Females	36	16	3	8	18	22	23	40	61	61	45
	Not stated											
Coös	Males	62	17	4	9	11	13	17	20	25	34	15
	Females	43	18	7	8	15	15	28	19	21	30	19
	Not stated											
Total	Males	728	194	67	94	168	206	291	400	553	644	373
	Females	595	198	58	102	176	229	266	333	466	650	484
	Not stated											
Grand total		1323	392	125	196	344	435	557	733	1019	1294	857

No. 17.—*Concluded.*

and Months, by Counties,* 1913.

90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
3 18	.....	6 2	43 47	30 34	36 40	31 38	25 41	35 34	22 32	42 25	41 34	34 38	27 26	27 27	..... 1	393 417	810
5 6	.....	5 1	27 32	35 28	28 29	24 23	18 21	27 30	26 30	19 35	29 33	22 21	25 27	24 31	.....	304 340	644
3 3	.....	1	15 18	16 22	21 16	13 17	15 11	16 7	23 12	28 16	13 22	12 7	17 17	9 17	.....	198 182	380
6 2	.....	.....	12 11	7 13	14 18	15 12	16 5	17 11	11 9	15 13	13 13	5 10	10 6	17 10	.....	152 131	283
9 20	1	5 3	50 66	47 44	35 46	42 40	41 38	51 34	55 39	43 34	53 37	40 38	40 37	56 52	.....	553 505	1058
7 15	1 1	5 5	112 112	112 92	87 93	94 78	87 91	100 90	110 117	130 117	100 88	74 70	79 104	99 94	.....	1184 1146	2330
5 4	.....	2	25 25	23 33	36 29	20 17	31 16	18 14	16 13	20 23	22 17	25 16	16 12	19 18	.....	271 233	504
6 6	1	2	16 13	11 12	14 14	18 8	17 7	18 11	11 13	14 12	19 6	12 13	15 11	14 13	.....	179 133	312
9 8	..... 1	5 3	20 26	35 32	30 33	26 39	33 31	28 28	39 24	36 31	27 25	26 27	26 28	17 21	1	344 345	689
3 1	..... .....	7 4	15 16	26 20	22 22	35 16	15 28	15 18	13 22	22 14	21 21	20 12	12 19	21 20	.....	237 228	465
56 83	3 2	38 18	335 366	342 330	323 340	318 288	298 289	325 277	326 311	369 320	338 296	270 252	267 287	303 303	1 1	3815 3660	7475
139	5	56	701	672	663	606	587	602	637	689	634	522	554	606	2	7475	.....

* Not including still births.

[illegible]

[illegible]

III. DISEASES OF THE CIRCULATORY SYSTEM.

M.	1	1	1	2	1	16	8	8	1	4	1	1	2
F.	1	3	1	1	1	54	30	24	1	2	3	2	
M.	3	3	2	1	4	54	30	24	1	3	8	1	
F.	1	3	2	2	3	777	412	365	1	4	14	1	
M.	40	33	30	27	38	777	412	365	1	1	2	119	
F.	38	33	29	33	41	777	412	365	6	2	4	74	
M.	3	6	9	3	1	68	45	23	6	1	5	1	
F.	3	6	9	3	1	68	45	23	6	1	5	1	
M.	14	16	17	18	15	275	174	101	1	3	4	10	
F.	10	9	11	4	6	46	19	27	1	3	14	70	
M.	1	3	3	1	2	46	19	27	1	3	18	36	
F.	7	1	3	1	5	46	19	27	1	2	5	4	
M.	2	1	1	2	1	2	5	4	1	2	6	7	
F.	2	1	1	2	1	2	5	4	1	1	1	1	
M.	2	1	1	1	1	9	5	4	1	1	1	1	
F.	2	1	1	1	1	9	5	4	1	1	1	1	

V. DISEASES OF THE DIGESTIVE SYSTEM.

[illegible]

VI. DISEASES OF THE GENITO-URINARY SYSTEM AND ITS ADNEXA.

[illegible]

[illegible]

* Included under this title are 224 premature births.

Table No. 18.—1913.—Concluded.

MONTHS.													WHOLE NUMBER.				AGES.												CAUSES OF DEATH.		
January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Totals.	Males.	Females.	Unknown.	Under 1.	1 to 3.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.		Unknown.	
M.	9	11	4	9	11	11	10	16	15	12	8	12	161	128	33			1	1	4	3	16	25	19	18	13	16	6	6		
F.	4	1	1	2	3	4	5	3	2	6	2							2	2	1		2	1	1	1	2	7	16	1		
M.	3	1	4	2	2	2	2	2	2	1	1		36	17	19			4	1			4	2	1	1	1	2				
F.	1	3	1	1	1	2	3	1	1	2	2							5	1			2	2	5	4						
M.						3							3	3							1				1						
M.													1	1								1									
M.						1							3	3																	
M.	2	1	2	5	2	12	9	15	1	1	3	1	64	55	9			4	8	6	7	17	8	2	1			1	1	1	
F.						1	4	2										1	1	2	2	1									
F.			1										1		1																
M.	2									2	3		9	7	2		1					2	2	1		1					
F.	1																			1											
M.	2		1	1	4	1	1	2	1	1	1		27	15	12		4	5	3		1	1	1	1							
F.	1	2		1	2	1	1	1	2		2						1	3	1		3	2	1	1							
M.			2			1	1	1	1	2	3		15	11	4		1	2	1	1	2	2	1		1	1					
F.	1	1			1												1									1					
XIV. ILL-DEFINED DISEASES.																															
M.							1	1																							
F.	1		1			1							9	4	5								1	1	1			1			
M.																															
F.			2			1					1													2	1	2	1		1		
M.																															
F.																															
M.	2	2	7	4	4	1	1	7	3	3	3		72	37	35		28	1				1	1	1	1	3	2	1			
F.	2	3	2	3	1	1	4	3	4	5	2	5					23	4				1	1	2	2	1					

* Railroad accidents, 36. Automobile accidents, 17. Motorcycle, 1.

SUMMARY OF VITAL STATISTICS.

Table No. 19.

Population of Counties in 1880, 1890, 1900, and 1910.

Counties.	1880.	1890.	1900.	1910.
Rockingham.....	49,064	49,650	51,118	52,188
Strafford.....	35,558	38,442	39,337	38,951
Belknap.....	17,948	20,321	20,321	21,309
Carroll.....	18,224	18,124	16,895	16,316
Merrimack.....	46,300	49,435	52,430	53,335
Hillsborough.....	75,634	93,247	112,640	126,072
Cheshire.....	28,734	29,579	31,321	30,659
Sullivan.....	18,161	17,304	18,009	19,337
Grafton.....	38,788	37,217	40,844	41,652
Coös.....	18,580	23,211	29,468	30,753
Total.....	346,991	376,530	411,588	430,572

The above table shows the population by counties according to the United States census for 1880, 1890, and 1900. It is from these figures that our calculations are made in arriving at the estimated population for each year as given in Table No. 24. The calculation is made upon the assumption that the increase between the respective decennial periods was constant. This would, doubtless, approximate very closely the exact population for each. At least it would be near enough to give correct percentages to an exceedingly small fraction. Percentages when given by years (excepting for census years) are based upon deductions made in the manner just stated.

Table No. 20.

Population of New Hampshire by Age Periods, Census Years 1880, 1890, 1900, and 1910.

Ages.	1880.	1890.	1900.	1910.
1 to 10.....	60,803	61,033	73,695	76,454
10 to 20.....	62,724	68,363	67,617	74,177
20 to 30.....	63,252	68,672	73,992	70,528
30 to 40.....	46,532	53,533	60,334	63,443
40 to 50.....	39,344	42,946	49,598	53,579
50 to 60.....	31,998	35,032	37,856	42,009
60 to 70.....	23,417	25,447	27,280	28,443
70 to 80.....	14,227	14,972	15,132	16,094
Over 80.....	4,694	5,469	4,956	5,183
Age unknown.....		1,063	1,128	662
Total.....	346,991	376,530	411,588	430,572

Table No. 21.—Births.
Showing Births from 1880 to 1913, inclusive.

Counties.	Births.																																	
	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913										
Rockingham.	733	675	749	692	637	640	757	727	750	752	773	764	797	895	806	859	857	871	899	884	866	917	850	947	895	977	1043	1005	1034	986	992	968	971	933
Strafford....	322	423	625	698	640	621	662	701	725	705	784	814	808	861	799	853	866	883	913	867	856	838	816	820	810	843	938	842	864	911	849	843	788	972
Belknap....	215	227	273	261	242	256	263	296	307	328	322	370	395	353	403	361	388	328	325	295	305	317	312	330	336	354	370	417	400	430	403	364	401	320
Carroll.....	153	198	274	286	275	245	264	249	236	260	261	279	309	312	318	304	280	328	270	276	260	270	242	282	259	261	284	249	296	272	294	252	250	292
Merrimack...	628	750	809	723	739	734	818	773	852	921	938	1032	988	1069	1107	1010	1018	986	980	1001	967	1023	994	938	1040	997	1010	989	951	935	1022	925	941	1027
Hillsborough.	840	879	1617	1675	1843	1952	2148	2313	1798	1923	1963	2144	2286	2489	2207	2529	2768	2697	2800	2378	2832	2446	2651	2641	2587	2722	2928	2951	2950	2758	3204	3069	3127	3249
Cheshire....	255	348	445	496	554	511	514	525	553	546	543	602	611	665	558	622	578	551	597	647	578	607	645	605	606	625	610	645	675	644	642	655	645	679
Sullivan....	245	236	265	269	268	267	230	269	276	287	306	309	339	312	309	337	285	304	302	290	309	327	323	303	314	370	329	366	366	345	397	394	361	427
Grafton.....	584	593	657	647	643	631	623	623	599	695	636	658	618	720	667	720	705	729	729	727	724	713	687	722	761	790	841	758	852	801	783	773	795	728
Cooks.....	274	286	410	403	406	462	378	434	347	495	420	538	595	672	686	657	689	782	706	753	738	706	729	730	756	843	871	861	882	831	800	750	854	809
Total...	4219	4615	6124	6150	6247	6319	6657	6910	6443	6912	6946	7510	7746	8348	7860	8252	8434	8459	8321	8118	8435	8164	8249	8318	8364	8782	9234	9083	9270	8913	9386	8993	9133	9236

Since 1893 still births and premature births have been excluded from this table. They will be found elsewhere.

Table No. 23.—Deaths.
Showing Deaths from 1880 to 1913, inclusive.

Counties.	Deaths.																																	
	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Rockingham.	627	717	732	699	873	911	963	876	896	875	1065	991	1026	1033	901	910	876	912	844	875	866	917	870	857	816	933	878	932	872	827	885	926	886	810
Strafford....	184	329	372	494	627	619	609	673	688	691	801	809	864	742	617	624	675	719	707	729	856	838	597	636	660	711	671	666	645	642	689	628	665	644
Belknap....	147	153	219	262	285	289	362	369	392	389	374	392	440	369	331	338	346	332	347	356	305	317	338	377	322	357	407	358	349	359	390	325	372	380
Carroll.....	107	189	219	253	333	269	303	294	328	298	303	341	342	305	299	297	284	282	277	290	260	270	261	278	244	278	269	274	256	254	293	297	240	283
Merrimaek..	595	695	726	762	736	796	833	835	920	891	983	951	1064	1063	953	930	887	872	827	914	967	1023	856	949	944	941	997	1005	978	1027	1033	1040	915	1058
Hillsborough	1203	1396	1390	1551	1655	1701	1681	1697	1846	1740	1973	1957	2092	2103	1902	1980	2024	2046	1899	1990	2832	2446	2039	1977	1923	2283	2303	2226	2065	2305	2189	2265	2049	2530
Cheshire....	240	271	405	418	497	494	475	482	488	525	557	482	608	595	514	512	438	479	499	523	578	607	435	458	535	508	495	524	514	476	534	462	499	504
Sullivan....	190	261	261	254	273	284	328	283	327	314	332	280	382	362	326	316	285	315	306	272	309	327	270	312	275	291	289	315	328	311	334	322	352	312
Grafton.....	429	482	487	547	652	611	616	602	655	625	651	648	749	696	638	681	634	689	638	662	724	713	611	678	634	622	744	706	679	689	659	686	725	689
Coös.....	107	157	190	181	263	227	256	368	314	348	329	459	421	395	367	341	342	381	399	434	738	706	363	447	451	415	445	480	475	392	449	459	444	465
Total....	3826	4650	5001	5421	6194	6201	6426	6479	6854	6696	7368	7310	7988	7663	6898	6929	6791	7027	6743	7045	8435	8164	6649	6969	6804	7339	7498	7486	7161	7282	7455	7410	7147	7475

Since 1893 still births and premature births have been excluded from this table. They will be found elsewhere.

Table No. 24.

**Births, Marriages and Deaths, with the Population and Rates,
for 1884 to 1913, inclusive.**

Years.	Population.*	Births.	Marriages.	Deaths.	Birth-rate per 1,000.	Persons married to 1,000.	Death-rate per 1,000.
1884.....	358,845	6,247	3,292	6,194	17.40	18.34	17.26
1885.....	361,806	6,319	3,180	6,201	17.46	17.56	17.13
1886.....	364,767	6,657	3,324	6,426	18.24	18.22	17.61
1887.....	367,728	6,910	3,495	6,479	18.78	19.00	17.61
1888.....	370,689	6,443	3,379	6,854	17.38	18.22	18.48
1889.....	373,650	6,912	3,621	6,696	18.49	19.36	17.91
1890.....	376,530	6,946	3,621	7,368	18.44	19.22	19.56
1891.....	379,896	7,510	3,904	7,310	19.77	20.55	19.24
1892.....	383,292	7,746	4,074	7,988	20.21	21.26	20.84
1893.....	386,719	8,348	4,090	7,663	21.58	21.15	19.81
1894.....	390,177	7,860	3,881	6,898	20.14	19.89	17.68
1895.....	393,665	8,252	4,015	6,929	20.96	20.39	17.60
1896.....	397,185	8,434	4,032	6,791	21.23	20.30	17.09
1897.....	400,737	8,459	3,776	7,027	21.11	18.86	17.55
1898.....	404,322	8,321	3,793	6,743	20.58	18.76	16.68
1899.....	407,938	8,118	3,741	7,045	19.90	18.33	17.27
1900.....	411,588	8,435	3,983	7,624	20.49	19.35	18.52
1901.....	413,486	8,164	4,001	6,975	19.17	19.35	16.86
1902.....	415,384	8,249	4,061	6,649	19.85	19.55	16.00
1903.....	417,282	8,318	4,004	6,969	19.93	19.19	16.70
1904.....	419,180	8,364	3,803	6,804	19.95	18.14	16.23
1905.....	421,078	8,782	4,212	7,339	20.85	20.00	17.42
1906.....	422,976	9,234	4,378	7,498	21.83	20.80	17.72
1907.....	424,874	9,083	4,546	7,486	21.37	21.39	17.61
1908.....	426,772	9,270	4,098	7,161	21.72	19.20	16.77
1909.....	428,670	8,913	4,079	7,282	20.79	19.03	16.98
1910.....	430,572	9,386	5,110	7,455	21.79	23.73	17.31
1911.....	432,470	8,993	4,340	7,410	20.79	20.07	17.13
1912.....	434,368	9,133	4,104	7,147	21.02	18.89	16.45
1913.....	436,266	9,236	4,292	7,475	21.17	19.67	17.13

* Population estimated for all but census years.

Table No. 25.

Population of 1900: Births, Marriages and Deaths, with rates of each to 1,000 of the population, for the year ending December 31, 1912.

Counties.	Population in 1910.	Births.	Rate per 1,000 of population.	Marriages.	Rate per 1,000 of population.	Deaths.	Rate per 1,000 of population.
Rockingham.....	52,188	971	18.60	488	9.35	886	16.97
Strafford.....	38,951	788	20.23	381	9.78	665	17.07
Belknap.....	21,309	401	18.81	161	7.55	372	17.45
Carroll.....	16,316	250	15.32	146	8.94	240	14.70
Merrimack.....	53,335	941	17.64	410	7.68	915	17.15
Hillsborough.....	126,072	3,127	24.80	1,427	11.31	2,049	16.25
Cheshire.....	30,659	645	21.03	279	9.10	499	16.27
Sullivan.....	19,327	361	18.66	242	12.52	352	18.20
Grafton.....	41,652	795	19.08	315	7.56	725	17.40
Coös.....	30,753	854	27.76	255	8.29	444	14.43
Total.....	430,572	9,133	21.21	4,104	9.53	7,147	16.59

Table No. 26.

Population of 1900: Births, Marriages and Deaths, with rates of each to 1,000 of the population, for the year ending December 31, 1913.

Counties.	Population in 1910.	Births.	Rate per 1,000 of population.	Marriages.	Rate per 1,000 of population.	Deaths.	Rate per 1,000 of population.
Rockingham.....	52,188	933	17.87	538	10.30	810	15.52
Strafford.....	38,951	772	19.81	345	8.85	644	16.53
Belknap.....	21,309	320	15.01	221	10.37	380	17.83
Carroll.....	16,316	292	17.89	143	8.76	283	17.34
Merrimack.....	53,335	1,027	19.25	421	7.89	1,058	19.83
Hillsborough.....	126,072	3,249	25.77	1,399	11.09	2,330	18.48
Cheshire.....	30,659	679	22.14	293	9.55	504	16.43
Sullivan.....	19,337	427	22.08	229	11.84	312	16.13
Grafton.....	41,652	728	17.47	436	10.46	689	16.54
Coös.....	30,753	809	26.30	267	8.68	465	15.12
Total.....	430,572	9,236	21.45	4,292	9.96	7,475	17.36

Table No. 27.
Percentage of American and Foreign Births, by Counties, 1912.

Counties.	Parents.			Births with parentage not stated.
	American born.	Foreign born.	One foreign born.	
Rockingham.....	57.13	26.53	16.34	10
Strafford.....	45.48	34.75	19.77	14
Belknap.....	59.39	20.05	20.56	7
Carroll.....	78.69	9.02	12.29	6
Merrimack.....	52.77	25.03	22.20	22
Hillsborough.....	27.11	52.41	20.48	65
Cheshire.....	57.70	26.89	15.41	9
Sullivan.....	59.31	23.21	17.48	12
Grafton.....	65.07	13.97	20.96	22
Coös.....	30.94	43.01	26.05	17
Total for state.....	44.45	35.53	20.02	184

Table No. 28.
Percentage of American and Foreign Births, by Counties, 1913.

Counties.	Parents.			Births with parentage not stated.
	American born.	Foreign born.	One foreign born.	
Rockingham.....	57.89	26.21	15.90	21
Strafford.....	43.77	35.01	21.22	18
Belknap.....	52.90	24.84	22.26	10
Carroll.....	81.07	6.07	12.86	12
Merrimack.....	53.27	27.62	19.11	17
Hillsborough.....	25.83	52.40	19.07	56
Cheshire.....	54.08	30.06	15.86	17
Sullivan.....	56.43	28.10	15.47	7
Grafton.....	63.29	14.63	22.08	17
Coös.....	31.70	43.27	25.03	14
Total for state.....	44.16	36.63	19.21	189

Table No. 29.
Illegitimate Births, 1912.

No. of child.	Age of mother.																Nationality.			Occupation.				Dwelling.																	
																	Amer- ican.	For- eign.	Domes- tic.	Mill.	Secy- ing.	None.	Not stated.	City.	Coun- try.																
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Not stated.										
1st...	3	5	8	4	8	7	9	5	7	2	3	3		3	1	1		1		2										1	3	70	22	31	10	1	22	28	47	45	
2d...				1					2	1	1				2	1																									
3d...									1	1																															
4th...																																									
5th...																																									
6th...																																									
Total	3	5	8	5	8	7	9	5	10	4	4	4		4	3	1	1		2		2	1	1				1			3	Total, 92										

MARRIAGES.

Table No. 31.

Marriage Rates for 1882 to 1913, inclusive.*

Years.	Marriages.	Persons married to 1,000 liv- ing.	Number living to one mar- ried.
1882.....	3,433	19.44	103
1883.....	3,495	19.68	102
1884.....	3,292	18.34	109
1885.....	3,180	17.56	114
1886.....	3,324	18.22	109
1887.....	3,495	19.00	105
1888.....	3,379	18.22	109
1889.....	3,621	19.36	103
1890.....	3,621	19.22	103
1891.....	3,904	20.55	97
1892.....	4,074	21.26	93
1893.....	4,090	21.15	94
1894.....	3,881	19.89	100
1895.....	4,015	20.39	98
1896.....	4,032	20.30	97
1897.....	3,776	18.86	106
1898.....	3,793	18.76	106
1899.....	3,741	18.33	107
1900.....	3,983	19.35	103
1901.....	4,001	19.35	103
1902.....	4,061	19.55	102
1903.....	4,004	19.19	104
1904.....	3,803	18.14	110
1905.....	4,212	20.00	99
1906.....	4,378	20.80	96
1907.....	4,546	21.39	93
1908.....	4,098	19.20	104
1909.....	4,079	19.03	105
1910.....	5,110	23.73	84
1911.....	4,340	20.07	99
1912.....	4,104	18.89	105
1913.....	4,292	19.67	101

* Population estimated for all but census years.

Table
Marriage Rates for 1882 to

Counties.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Rockingham....	8.51	8.09	8.49	9.04	8.89	9.22	8.45	9.72	9.22	10.21	10.08	10.96	9.24	10.98	10.77
Strafford.....	11.84	11.66	11.30	10.48	11.21	11.17	10.98	9.88	11.88	12.12	11.94	11.88	12.25	12.28	12.54
Belknap.....	9.01	10.61	7.78	7.84	9.45	10.87	9.23	9.27	8.75	9.84	10.00	9.22	9.44	10.23	8.71
Carroll.....	8.73	9.62	9.40	10.01	9.74	8.21	8.98	9.71	8.55	11.03	10.43	11.33	9.60	9.77	10.54
Merrimack....	7.75	9.14	7.23	7.54	7.16	8.68	8.30	8.61	9.56	8.69	9.24	9.46	9.02	8.62	8.84
Hillsborough...	12.95	11.73	10.72	9.65	10.17	10.41	9.80	11.08	10.07	11.18	12.93	10.15	10.91	11.74	12.12
Cheshire.....	8.01	9.02	8.01	7.97	8.18	8.66	7.48	8.43	8.01	9.77	9.04	8.55	8.95	8.89	8.69
Sullivan.....	8.28	9.27	7.74	6.14	7.93	7.00	8.35	8.86	9.93	10.11	8.44	8.85	8.84	9.01	8.21
Grafton.....	8.28	8.83	8.68	8.59	8.38	8.68	8.55	9.15	8.43	9.10	8.62	9.69	10.77	10.91	9.81
Coös.....	8.82	7.46	9.89	8.04	8.76	9.82	10.07	9.47	10.25	11.03	9.94	12.19	13.05	11.50	13.61
Average....	9.72	9.84	9.17	8.78	9.11	9.50	9.11	9.68	9.61	10.31	10.58	10.56	10.21	10.39	10.38

No. 32.

1913, inclusive, by Counties.

1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
10.13	9.85	10.31	10.97	10.64	11.63	10.27	8.97	9.76	11.79	11.81	12.14	13.36	14.67	12.09	9.35	10.30
11.84	11.08	11.42	10.49	10.29	9.94	10.63	9.20	11.79	12.78	12.68	11.23	10.60	12.34	10.14	9.78	8.85
7.48	8.26	8.66	9.37	8.04	8.60	11.22	9.01	10.24	10.08	9.67	9.06	9.47	10.37	8.11	7.55	10.37
8.83	9.38	8.93	8.76	9.23	8.17	9.58	9.29	9.17	8.52	9.88	10.05	8.87	8.33	8.21	8.94	8.76
8.37	9.24	8.48	8.98	8.54	8.22	7.91	7.81	9.11	8.06	8.90	7.49	7.53	8.58	7.64	7.68	7.89
11.58	10.96	10.26	9.74	9.69	10.14	10.66	10.05	10.67	11.48	11.45	9.84	10.49	14.76	11.95	11.31	11.09
8.01	8.62	9.13	8.78	10.38	8.55	8.39	9.00	10.05	9.35	10.02	8.90	7.94	9.65	8.51	9.10	9.55
8.67	8.95	8.61	9.27	8.49	10.61	8.55	8.77	9.77	11.88	11.49	9.93	9.60	10.60	9.10	12.52	11.84
9.40	10.34	10.21	9.03	9.79	9.82	8.74	9.27	9.59	9.68	11.04	9.96	9.05	9.53	8.57	7.56	10.46
11.85	11.46	11.93	10.11	10.89	11.40	9.78	9.74	11.23	10.55	12.14	10.89	9.33	9.39	9.68	8.29	8.68
9.61	9.81	9.79	9.55	9.59	9.86	9.73	9.23	10.23	10.63	11.04	9.95	9.91	11.86	10.07	9.53	9.96

Table No. 33.

Divorces Decreed from 1870 to

Counties.	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889
Rockingham.....	19	20	29	34	41	23	37	18	30	30	44	30	23	21	28	25	40	41	26	43
Strafford.....	12	6	24	27	25	17	20	29	29	34	58	42	36	53	32	28	46	24	41	36
Belknap.....		7	7	13	12	10	18	16	16	16	22	17	14	15	19	20	24	25	26	27
Carroll.....	4	1	1	9	9	4	10	13	19	13	11	19	9	7	14	20	12	12	22	20
Merrimack.....	15	27	32	13	51	37	40	23	22	36	41	25	49	49	48	35	46	48	49	42
Hillsborough.....	64	37	58	51	77	75	65	73	61	69	83	87	90	74	93	86	110	78	82	87
Cheshire.....	12	19	19	16	15	22	21	17	18	22	31	21	34	25	30	25	32	26	29	31
Sullivan.....	6	6	10	16	17	13	26	9	10	8	9	22	17	12	11	20	25	20	26	18
Grafton.....	13	21	15	29	22	20	20	29	17	27	25	37	27	14	28	22	30	35	40	39
Coös.....	4	5	2	4	12	11	9	10	11	10	15	7	15	3	12	10	17	16	18	25
Total.....	149	149	197	212	281	232	266	237	233	265	339	307	314	273	315	291	382	325	359	368

—Divorces.

1913, inclusive, by Counties.

1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
42	47	33	42	34	60	47	39	57	52	43	59	62	63	72	55	49	75	86	62	57	65	76	60
38	30	30	39	38	35	37	45	40	32	37	34	47	37	26	31	37	37	51	31	44	43	41	44
25	37	27	25	28	23	38	25	23	35	36	42	39	26	27	38	43	39	38	37	33	51	34	29
20	17	18	20	20	25	25	21	17	16	23	22	29	20	29	23	19	18	35	20	19	37	29	26
53	52	55	53	50	56	35	47	65	51	63	77	50	58	61	55	44	78	49	76	75	72	79	81
95	115	89	108	109	99	118	115	120	108	107	95	111	144	127	119	129	139	156	127	152	152	200	164
32	32	32	28	29	28	29	33	34	28	30	35	32	37	48	31	28	30	36	37	41	31	43	46
22	13	8	15	17	19	11	25	23	28	22	29	30	28	29	29	32	25	25	23	35	22	26	39
33	49	38	39	47	46	43	48	40	56	45	60	58	73	73	59	63	56	78	69	72	79	89	84
22	20	17	29	26	16	23	31	26	29	20	29	25	32	33	31	31	25	15	48	27	36	24	47
382	412	347	398	398	407	406	429	445	435	426	482	483	518	525	471	475	522	569	530	555	588	641	620

Table No. 34.
Causes upon which Divorces Have Been Decreed for Thirty-two Years, 1882 to 1913, inclusive, by Counties.

COUNTIES.	Non-support.	Abandonment, refusal to cohabit and extreme cruelty.	Absent three years.	Abandonment.	Abandonment and adultery.	Abandonment and willing absence.	Absent three years and abandonment.	Adultery.	Adultery and treatment endangering health and reason.	Conviction of crime and imprisonment.	Desertion and bigamy.	Desertion.	Extreme cruelty.	Extreme cruelty and abandonment.	Extreme cruelty and adultery.	Absence of wife from state ten years together.	Extreme cruelty, habitual drunkenness and adultery.	Habitual drunkenness.	Habitual drunkenness, abandonment and refusal to cohabit.	Habitual drunkenness and adultery.	Habitual drunkenness and treatment injurious to health.	Habitual drunkenness and desertion.	Impotency.	Joining religious sect and refusal to cohabit.	Willing absence and refusal to cohabit.	Nullity.	Prior marriage.	Refusal to cohabit.	Treatment injurious to health.	Treatment injurious to health and extreme cruelty.	Treatment injurious to health and to reason.	Treatment injurious to reason.	Willing absence three years.	No cause assigned.	Total.
Rockingham.	1	1	4	594	265	1	1	1	1	8	497	133	1	1	1	1	1	1	1	1	1	1	4	4	1	14	91	4	66	2	1,584				
Strafford.	1	1	15	339	227	2	7	7	7	2	16	81	3	3	3	3	3	3	3	3	3	3	3	1	98	27	6	68	1	1,200					
Belknap.	1	1	11	225	218	6	4	4	4	6	225	90	1	4	4	4	4	4	4	4	4	1	1	1	49	81	3	44	1	968					
Carroll.	1	1	5	194	147	3	7	7	7	3	167	45	2	2	2	2	2	2	2	2	2	2	2	2	40	19	2	26	1	664					
Merrimack.	1	1	22	420	369	13	10	10	10	13	478	155	2	3	3	3	3	3	3	3	3	2	2	2	46	79	4	133	2	1,801					
Hillsborough.	1	1	16	1288	578	26	54	54	54	26	1068	216	2	19	19	2	2	2	2	2	2	7	7	3	5	139	28	13	177	2	3,698				
Cheshire.	1	1	3	372	205	4	10	10	10	4	257	63	3	5	5	1	1	1	1	1	3	3	3	3	6	54	10	30	1	1,051					
Sullivan.	1	1	2	175	152	1	4	4	4	1	220	31	1	2	2	1	1	1	1	1	2	1	1	1	73	18	4	26	1	724					
Grafton.	1	1	2	449	374	10	11	11	11	10	425	99	1	6	6	1	1	1	1	1	1	1	1	1	59	71	3	53	1	1,632					
Cooks.	1	1	7	198	150	4	4	4	4	4	222	56	1	1	1	4	4	4	4	4	4	2	5	5	55	20	4	42	1	778					
Total.	1	1	87	4254	2685	77	112	112	112	77	102	3758	24	38	3	1	7	13	14	4	425	73	1	7	599	40	50	4	665	8	14,100				

Table No. 35.

Ratio of Divorces to Marriages from 1882 to 1913, inclusive.*

Years.	Number of marriages	Person married to 1,000.	Number of divorces	Ratio of divorces to marriages.
1882.....	3,433	19.44	314	1 to 10.93
1883.....	3,495	19.68	273	1 to 12.80
1884.....	3,292	18.34	315	1 to 10.45
1885.....	3,180	17.56	291	1 to 10.92
1886.....	3,324	18.22	382	1 to 8.70
1887.....	3,495	19.00	325	1 to 10.75
1888.....	3,379	18.22	359	1 to 8.75
1889.....	3,621	19.36	368	1 to 9.83
1890.....	3,621	19.22	382	1 to 9.48
1891.....	3,904	20.55	412	1 to 10.55
1892.....	4,074	21.26	347	1 to 11.74
1893.....	4,090	21.15	398	1 to 10.27
1894.....	3,881	19.89	398	1 to 9.75
1895.....	4,015	20.39	407	1 to 9.86
1896.....	4,032	20.30	406	1 to 9.93
1897.....	3,776	18.86	429	1 to 8.80
1898.....	3,793	18.76	445	1 to 8.52
1899.....	3,741	18.33	435	1 to 8.60
1900.....	3,983	19.35	426	1 to 9.35
1901.....	4,001	19.35	482	1 to 8.30
1902.....	4,061	19.55	483	1 to 8.41
1903.....	4,004	19.19	518	1 to 7.73
1904.....	3,803	18.14	525	1 to 7.24
1905.....	4,212	20.00	471	1 to 8.94
1906.....	4,378	20.80	475	1 to 9.21
1907.....	4,546	21.39	522	1 to 8.70
1908.....	4,098	19.20	569	1 to 7.20
1909.....	4,079	19.03	530	1 to 7.69
1910.....	5,110	23.73	555	1 to 9.20
1911.....	4,340	20.07	588	1 to 7.38
1912.....	4,104	21.02	641	1 to 6.40
1913.....	4,292	21.17	620	1 to 6.92

*Population estimated for all but census years.

Table No. 35 gives the ratio of marriages to divorces for the years mentioned. Tables showing the alleged causes of divorce may be found elsewhere in this report.

Table No. 36.

Ratio of Divorces to Marriages, by Counties, for 1912.

Counties.	Number of marriages.	Number of divorces.	Ratio of divorces to marriages.
Rockingham.....	488	76	1 to 6.42
Strafford.....	381	41	1 to 9.29
Belknap.....	161	34	1 to 4.73
Carroll.....	146	29	1 to 5.03
Merrimack.....	410	79	1 to 5.18
Hillsborough.....	1,427	200	1 to 7.13
Cheshire.....	279	43	1 to 6.48
Sullivan.....	242	26	1 to 9.30
Grafton.....	315	89	1 to 3.53
Coös.....	255	24	1 to 10.62
Total.....	4,104	641	1 to 6.40

Table No. 37.

Ratio of Divorces to Marriages, by Counties, for 1913.

Counties.	Number of marriages.	Number of divorces.	Ratio of divorces to marriages.
Rockingham.....	538	60	1 to 8.96
Strafford.....	345	44	1 to 7.84
Belknap.....	221	29	1 to 7.62
Carroll.....	143	26	1 to 5.50
Merrimack.....	421	81	1 to 5.19
Hillsborough.....	1,399	164	1 to 8.53
Cheshire.....	293	46	1 to 6.36
Sullivan.....	229	39	1 to 5.87
Grafton.....	436	84	1 to 5.19
Coös.....	267	47	1 to 5.68
Total.....	4,292	620	1 to 6.92

DEATHS.

Table No. 38.

Deaths and Death Rates from 1884 to 1913, inclusive.

Years.	Deaths registered.	Deaths to 1,000 population.*	Population.*
1884.....	6,194	17.26	358,845
1885.....	6,201	17.13	361,806
1886.....	6,426	17.61	364,767
1887.....	6,479	17.61	367,728
1888.....	6,854	18.48	370,689
1889.....	6,696	17.91	373,650
1890.....	7,368	19.56	376,530
1891.....	7,310	19.24	379,896
1892.....	7,988	20.84	383,292
1893.....	7,663	19.81	386,719
1894.....	6,898	17.68	390,177
1895.....	6,929	17.60	393,665
1896.....	6,791	17.09	397,185
1897.....	7,027	17.53	400,737
1898.....	6,743	16.68	404,322
1899.....	7,045	17.27	407,938
1900.....	7,624	18.52	411,588
1901.....	6,975	16.86	413,486
1902.....	6,649	16.00	415,384
1903.....	6,969	16.70	417,282
1904.....	6,804	16.23	419,180
1905.....	7,339	17.42	421,078
1906.....	7,498	17.72	422,976
1907.....	7,486	17.61	424,874
1908.....	7,161	16.77	426,772
1909.....	7,282	16.98	428,670
1910.....	7,455	17.31	430,572
1911.....	7,410	17.13	432,470
1912.....	7,147	16.45	434,368
1913.....	7,475	17.13	436,266

*Population estimated for all but census years.

Table No. 39.

Deaths and Death Rates by Counties, from 1884 to 1913, inclusive.

Counties.	1884.		1885.		1886.		1887.		1888.		1889.		1890.		1891.		1892.		1893.		1894.		1895.		1896.		1897.		1898.	
	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.
Rockingham...	873	17.69	911	18.43	963	19.46	876	17.67	896	18.05	875	17.61	1,065	21.45	991	19.95	1,026	20.66	1,033	20.80	901	18.15	910	18.33	876	17.64	912	18.37	844	16.99
Strafford.....	627	17.07	619	16.73	609	16.33	673	17.91	688	18.17	691	18.11	801	20.83	809	21.04	864	22.47	742	19.30	617	16.05	624	16.23	675	17.56	719	18.70	707	18.39
Belknap.....	285	15.09	289	15.12	362	18.71	369	18.84	392	19.78	389	19.40	374	18.40	392	19.29	440	21.65	369	18.16	381	18.74	338	16.63	346	17.02	332	16.34	347	17.08
Carroll.....	333	18.31	269	14.80	303	16.68	294	16.20	328	18.08	298	16.44	303	16.71	341	18.81	342	18.87	305	16.83	299	16.49	297	16.39	284	15.67	282	15.56	277	15.28
Merrimack....	736	15.48	796	16.63	833	17.29	835	17.22	920	18.86	891	18.15	983	19.88	951	19.23	1,064	21.52	1,063	21.50	953	19.27	930	18.81	887	17.94	872	17.63	827	16.73
Hillsborough...	1,655	20.02	1,701	20.15	1,681	19.51	1,697	19.38	1,846	20.59	1,740	19.04	1,973	21.14	1,957	20.98	2,092	22.43	2,103	22.55	1,902	20.39	1,980	21.23	2,024	21.71	2,046	21.93	1,899	20.36
Cheshire.....	497	17.06	494	16.90	475	16.19	482	16.39	488	16.52	525	17.72	557	18.49	482	16.29	608	20.55	595	20.11	514	17.37	512	17.31	438	14.81	479	16.19	499	16.87
Sullivan.....	273	15.32	284	16.02	328	18.59	283	16.12	327	18.72	314	18.06	332	19.81	280	16.18	382	21.49	362	20.92	326	18.84	316	18.26	285	16.47	315	18.20	306	17.68
Grafton.....	652	17.06	611	16.05	616	16.24	602	15.93	655	17.35	625	16.67	651	17.49	648	17.41	749	20.01	696	18.70	638	17.14	681	18.28	634	17.03	689	18.51	638	17.14
Coös.....	263	12.88	227	10.87	256	12.00	368	16.89	314	14.11	348	15.32	329	14.17	459	19.77	421	13.13	395	17.02	367	15.81	341	14.69	342	14.69	331	16.42	399	17.19
Total.....	6,194	17.26	6,201	17.13	6,426	17.61	6,479	17.61	6,854	18.48	6,696	17.91	7,368	19.56	7,310	19.41	7,988	21.21	7,663	20.35	6,898	18.32	6,929	18.40	6,791	18.04	7,027	18.66	6,743	17.91

Table No. 39.—*Concluded.*

Counties.	1899.		1900.		1901.		1902.		1903.		1904.		1905.		1906.		1907.		1908.		1909.		1910.		1911.		1912.		1913.	
	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.	Deaths.	Death rates.
Rockingham...	875	17.62	967	18.91	898	17.56	879	17.19	857	16.77	816	15.96	933	18.25	878	17.17	932	18.23	872	17.05	827	16.17	885	16.95	926	17.74	886	16.97	810	15.52
Stafford.....	729	18.96	780	19.57	643	16.34	597	15.18	636	16.17	660	16.77	711	18.07	671	17.05	666	16.93	645	16.39	642	16.32	689	17.68	628	16.12	665	17.07	644	16.53
Belknap.....	356	17.51	374	19.15	348	17.82	338	17.31	377	19.31	322	16.49	357	18.28	407	20.94	358	18.33	349	17.87	359	18.39	390	18.30	325	15.25	372	17.45	380	17.83
Carroll.....	290	16.00	303	17.93	210	12.43	261	15.45	278	16.45	244	14.44	278	16.45	269	15.92	274	16.21	256	15.15	254	15.03	293	17.95	297	18.20	240	14.70	283	17.34
Merrimack...	914	18.49	1,072	20.44	852	16.25	856	16.33	949	18.10	944	18.00	941	17.94	997	19.01	1,005	19.16	978	18.65	1,027	19.58	1,033	19.36	1,040	19.50	915	17.15	1,058	19.83
Hillsborough...	1,990	21.34	2,146	19.05	2,115	18.77	2,039	20.39	1,977	17.55	1,923	17.07	2,283	20.26	2,303	20.44	2,226	19.76	2,065	18.33	2,305	20.46	2,189	17.36	2,265	17.96	2,049	16.25	2,330	18.48
Cheshire.....	523	17.68	496	17.83	534	17.05	435	13.89	458	14.62	525	17.08	508	16.21	495	15.80	524	16.72	514	16.41	476	15.19	534	17.41	462	15.06	499	16.27	504	16.43
Sullivan.....	272	15.66	332	17.88	320	17.77	270	14.99	312	17.32	275	15.19	291	16.15	289	15.95	315	17.48	328	18.12	311	17.18	334	17.27	322	16.65	352	18.20	312	16.13
Grafton.....	662	17.78	719	17.60	677	16.57	611	14.96	678	16.59	634	17.03	622	15.22	744	18.21	706	17.28	679	16.62	689	16.86	659	15.82	686	16.46	725	17.40	689	16.54
Coös.....	434	18.69	435	14.76	378	12.82	363	12.32	447	15.08	451	15.30	415	14.08	445	15.10	480	16.28	475	16.11	392	13.30	449	14.60	450	14.92	444	14.43	465	15.12
Total.....	7,045	18.71	7,624	18.52	6,975	16.94	6,649	16.15	6,969	16.93	6,804	16.53	7,339	17.83	7,498	18.21	7,486	18.18	7,161	17.39	7,282	17.69	7,455	17.31	7,410	17.20	7,147	16.59	7,475	17.36

Table No. 40.

Mortality of Males and Females compared, 1884 to 1913, inclusive.

Years.	Male decedents.	Female decedents.	Male decedents to 100 female decedents.	Death rate of males to 1,000 male population.	Death rate of females to 1,000 of female population.
1884.....	3,034	3,122	97.18	17.79	17.69
1885.....	2,948	3,194	92.29	17.28	18.09
1886.....	3,155	3,212	98.20	18.50	18.20
1887.....	3,174	3,267	97.15	18.61	18.51
1888.....	3,419	3,382	101.09	20.04	19.16
1889.....	3,253	3,389	95.98	19.07	19.20
1890.....	3,692	3,624	101.87	21.65	20.53
1891.....	3,557	3,453	103.01	19.60	17.65
1892.....	3,981	3,990	99.77	21.33	21.00
1893.....	3,827	3,812	100.39	20.51	20.42
1894.....	3,392	3,498	96.97	18.18	18.41
1895.....	3,400	3,515	96.72	18.22	18.50
1896.....	3,364	3,415	98.51	18.03	17.98
1897.....	3,461	3,550	97.49	18.55	18.69
1898.....	3,403	3,335	102.04	18.24	17.55
1899.....	3,532	3,509	100.64	18.93	18.47
1900.....	3,771	3,847	98.02	18.36	18.65
1901.....	3,551	3,423	103.73	17.29	16.59
1902.....	*3,369	3,280	102.71	16.40	15.91
1903.....	†3,550	3,419	103.83	17.28	16.58
1904.....	3,400	3,404	99.88	16.55	16.50
1905.....	‡3,734	3,605	103.57	18.18	17.48
1906.....	§3,770	3,728	101.12	18.35	18.07
1907.....	||3,872	3,614	107.13	18.85	17.52
1908.....	a3,713	3,448	107.68	18.07	16.72
1909.....	b3,807	3,475	109.55	18.53	16.85
1910.....	c3,861	3,594	107.42	18.79	17.42
1911.....	d3,827	3,583	106.80	18.62	17.37
1912.....	e3,711	3,436	108.00	17.15	16.03
1913.....	3,815	3,660	104.23	17.63	17.08

*One, sex not stated, classed with males. †Three, sex not stated, classed with males. ‡Two, sex not stated, classed with males. §One, sex not stated, classed with males. ||Six, sex not stated, classed with males. §One, sex not stated, classed with males. bThree, sex not stated, classed with males. cOne, sex not stated, classed with males. dTwo, sex not stated, classed with males. eOne, sex not stated, classed with males.

Table No. 41.

Deaths at Age Periods, by Percentages, from 1883 to 1913, inclusive.*

Years.	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	Over 60.
1883	14.33	7.58	2.56	5.55	8.58	6.73	6.22	7.64	37.93
1884	16.22	7.36	2.61	5.30	7.93	6.26	6.33	7.75	38.38
1885	15.98	7.14	2.11	4.42	7.50	6.71	6.71	7.76	40.09
1886	16.89	7.70	2.86	4.82	7.73	6.55	6.12	7.47	38.86
1887	17.64	7.26	2.05	4.89	6.96	6.25	6.56	7.72	39.70
1888	19.23	7.63	2.04	4.93	7.07	6.00	5.53	7.57	38.72
1889	19.44	7.71	2.66	4.64	6.56	6.15	5.93	7.63	38.40
1890	16.23	6.67	1.99	4.28	7.04	7.42	6.62	9.17	40.49
1891	13.30	7.08	2.55	4.40	6.95	6.01	6.29	8.15	40.25
1892	16.17	6.64	2.18	4.39	6.70	6.63	6.60	8.76	41.77
1893	17.83	7.13	1.93	4.32	7.20	6.62	6.94	8.10	39.86
1894	17.52	7.31	2.47	3.89	7.06	7.03	6.35	8.54	39.78
1895	17.10	7.06	2.09	4.21	6.99	5.82	6.66	8.18	41.88
1896	18.08	7.90	2.03	4.31	7.10	6.49	6.14	8.49	39.46
1897	17.01	7.21	2.58	3.76	7.12	7.02	6.12	8.45	40.73
1898	17.93	7.37	1.83	3.32	6.84	6.69	6.24	8.78	41.00
1899	17.54	7.61	1.98	3.58	6.44	5.62	6.72	8.49	42.11
1900	17.23	7.72	2.29	3.75	6.75	6.03	6.48	8.79	40.91
1901	15.55	6.61	1.84	3.04	6.91	6.65	7.44	9.51	42.45
1902	16.21	7.16	2.02	3.49	6.19	6.42	7.14	9.39	41.98
1903	15.07	6.48	2.07	3.57	6.62	5.97	6.91	9.39	43.91
1904	15.47	5.37	1.82	3.23	6.17	7.09	7.12	9.65	44.07
1905	16.68	6.70	2.23	3.74	5.77	6.39	7.45	8.87	42.04
1906	18.53	6.14	1.96	3.64	5.34	6.87	6.84	8.52	42.14
1907	17.74	5.17	1.82	3.25	5.27	6.26	7.09	9.06	44.32
1908	18.98	5.56	1.63	3.03	5.56	5.86	7.30	9.19	42.89
1909	18.94	5.58	1.78	2.71	4.74	6.57	6.66	9.50	43.52
1910	18.53	4.93	1.69	2.71	5.32	5.79	6.84	9.73	44.46
1911	16.94	5.33	1.67	3.11	4.76	5.77	7.25	10.17	45.00
1912	15.57	4.50	1.41	2.68	5.08	6.34	7.11	10.55	46.76
1913	17.83	5.28	1.68	2.64	4.64	5.86	7.51	9.88	44.67

*Not including those with age not stated, premature and still births.

Table No. 42.

Deaths at Different Periods Compared with the Number Living
at the Same Period, 1912.*

	1912.	Persons living at same ages, census of 1910.	Death rate per 1,000.
Under 1 year.....	1,106	8,325	132.65
Under 5 years.....	1,425	39,581	36.00
20 to 30 years.....	361	70,528	5.11
All others.....	5,361	320,463	16.72
All ages.....	7,147	430,572	16.59

Table No. 43.

Deaths at Different Periods, Compared with the Number Living
at the Same Period, 1913.

	1913	Persons living at same ages, census of 1900.	Death rate per 1000.
Under 1 year.....	1,323	8,325	158.91
Under 5 years.....	1,715	39,581	43.32
20 to 30 years.....	344	70,528	4.87
All others.....	5,406	320,463	16.86
All ages.....	7,475	430,572	17.36

*Excluding still births and premature births.

Table No. 44.

Deaths by Ages and Sex, from 1884 to 1911, inclusive.*

Years.	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.
1884. Males.....	460	243	72	136	224	168	180	245	322	502	292	30	1	60
Females.....	353	212	90	192	266	220	211	235	336	444	379	70		51
Not stated.....	3	1			1		1		1					4
Total.....	816	456	162	328	491	388	392	480	659	946	671	100	1	115
1885. Males.....	416	225	62	109	190	181	190	252	394	478	284	32	1	43
Females.....	371	217	68	164	275	235	226	225	355	463	398	74	2	50
Not stated.....	19	1	1	1			4	2	3					5
Total.....	805	443	131	274	465	416	416	481	751	944	682	106	3	98
1886. Males.....	487	273	94	132	205	188	198	228	368	499	317	42	2	33
Females.....	385	221	90	178	292	233	195	252	339	447	397	83	3	28
Not stated.....	19	1												3
Total.....	891	495	184	310	497	421	393	488	707	946	714	125	5	64
1887. Males.....	490	231	71	142	196	184	186	254	377	512	336	45	1	34
Females.....	416	239	61	175	255	221	239	246	358	494	350	93	6	28
Not stated.....	8		1											1
Total.....	914	470	133	317	451	405	425	500	735	1006	686	138	7	63
1888. Males.....	588	280	75	144	213	177	180	257	392	507	377	47	1	53
Females.....	459	243	65	194	271	241	199	262	375	511	360	79	5	21
Not stated.....	13													1
Total.....	1060	523	140	338	484	418	379	519	767	1018	737	126	6	87
1889. Males.....	536	269	90	131	187	186	175	241	381	492	342	43		29
Females.....	470	245	88	179	251	226	222	270	398	471	366	75	3	29
Not stated.....	8	2		1	1									1
Total.....	1014	516	178	311	439	412	397	511	779	963	708	118	3	59
1890. Males.....	609	250	73	143	229	242	220	308	422	576	368	52		59
Females.....	524	216	66	156	263	277	242	332	399	513	406	86	5	44
Not stated.....	13	2								1				10
Total.....	1146	468	139	299	492	519	462	640	821	1090	774	138	5	113
1891. Males.....	703	256	86	134	248	206	210	279	438	530	346	52		69
Females.....	551	231	90	170	232	208	225	284	395	507	412	97	3	48
Not stated.....	10	2			1									1
Total.....	1264	489	176	304	480	412	435	563	833	1037	758	149	3	118
1892. Males.....	681	251	79	155	219	226	228	312	502	631	397	40	2	88
Females.....	539	251	86	177	287	275	271	349	473	554	467	89	1	61
Not stated.....	5												3	
Total.....	1225	502	165	332	506	501	499	661	975	1185	864	129	6	149
1893. Males.....	716	251	69	146	238	227	225	292	478	568	342	35	5	72
Females.....	574	265	71	167	283	252	277	294	389	537	431	98	3	43
Not stated.....	6													4
Total.....	1296	516	140	313	521	479	502	586	867	1105	773	133	8	119
1894. Males.....	647	245	82	114	227	219	205	273	395	555	329	49		52
Females.....	545	254	87	152	255	261	229	310	396	533	381	76	1	18
Not stated.....	4													4
Total.....	1196	499	169	266	482	480	434	583	791	1088	710	125	1	74
1895. Males.....	638	236	74	143	205	182	222	262	457	556	332	45		48
Females.....	526	247	69	145	273	216	234	298	384	573	429	84	4	33
Not stated.....	6									1				7
Total.....	1170	483	143	288	478	398	456	560	841	1130	761	129	4	88
1896. Males.....	658	267	62	122	235	199	189	268	419	558	288	46		53
Females.....	545	263	74	167	241	236	223	301	413	489	344	89		30
Not stated.....	9													3
Total.....	1212	530	136	289	476	435	412	569	832	1047	632	135		86
1897. Males.....	673	256	83	130	223	187	203	291	405	533	380	43		54
Females.....	498	242	96	130	270	299	221	294	447	536	395	81		41
Not stated.....	7	1												8
Total.....	1178	499	179	260	493	486	424	585	852	1069	775	124		103
1898. Males.....	679	266	58	111	201	215	200	277	425	556	316	52	2	45
Females.....	510	224	64	110	254	230	215	307	433	509	364	66	4	45
Not stated.....	4								1					
Total.....	1193	490	122	221	455	445	415	584	859	1065	680	118	6	90

Table No. 44.—*Concluded.*

Years.	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.
1899. Males.....	663	296	74	110	212	179	235	285	426	598	366	34	2	52
Females.....	555	233	64	139	236	212	232	299	426	566	414	92	5	36
Not stated.....	2													2
Total.....	1220	529	138	249	448	391	467	584	852	1164	780	126	7	90
1900. Males.....	722	304	91	118	235	210	238	315	495	596	350	49	6	42
Females.....	578	278	82	165	275	245	251	349	457	588	451	95	2	31
Not stated.....	4	1												1
Total.....	1304	583	173	283	510	455	489	664	952	1184	801	144	8	74
1901. Males.....	603	232	62	103	242	233	256	336	475	580	355	41	1	32
Females.....	472	225	65	107	236	227	259	322	441	565	384	93	3	24
Not stated.....	1													
Total.....	1076	457	127	210	478	460	515	658	916	1145	739	134	4	56
1902. Males.....	593	240	70	104	211	209	225	305	449	558	320	46	4	34
Females.....	476	232	63	126	197	214	246	314	445	494	378	72	1	22
Not stated.....														1
Total.....	1069	472	133	230	408	423	471	619	894	1052	698	118	5	57
1903. Males.....	569	231	66	131	221	206	239	348	476	599	383	45		33
Females.....	472	217	77	116	237	207	239	301	476	562	401	91	3	20
Not stated.....	1													2
Total.....	1042	448	143	247	458	413	478	649	952	1161	784	136	3	55
1904. Males.....	577	183	65	107	176	236	250	334	450	574	360	50	3	35
Females.....	466	179	58	111	240	242	230	317	444	550	438	101	2	26
Not stated.....														
Total.....	1043	362	123	218	416	478	480	659	894	1124	798	151	5	61
1905. Males.....	659	255	84	118	189	217	290	341	506	598	377	50	1	47
Females.....	555	233	78	154	231	248	252	305	467	588	387	91	5	11
Not stated.....	2													
Total.....	1216	488	162	272	420	465	542	646	973	1176	764	141	6	58
1906. Males.....	772	237	75	137	174	226	252	327	490	619	364	63		33
Females.....	607	220	71	134	223	285	257	307	522	579	406	92	1	24
Not stated.....														1
Total.....	1379	457	146	271	397	511	509	634	1012	1198	770	155	1	58
1907. Males.....	726	217	60	126	200	224	269	350	544	675	398	46	2	29
Females.....	591	167	75	115	192	241	257	323	467	657	410	91	2	26
Not stated.....	6													
Total.....	1323	384	135	241	392	465	526	673	1011	1332	808	137	4	55
1908. Males.....	790	203	69	100	190	201	272	331	516	605	360	54		21
Females.....	562	193	47	116	206	216	248	324	418	594	404	104	1	15
Not stated.....	1													
Total.....	1353	396	116	216	396	417	520	655	934	1199	764	158	1	36
1909. Males.....	776	203	66	110	176	248	266	345	574	621	337	49	1	32
Females.....	591	201	63	86	167	227	216	342	452	604	432	77	1	16
Not stated.....	3													
Total.....	1370	404	129	196	343	475	482	687	1026	1225	769	126	2	48
1910. Males.....	792	192	71	99	203	205	264	398	558	632	417	*	*	30
Females.....	581	173	54	102	191	224	243	323	517	583	588			15
Total.....	1373	365	125	201	394	429	507	721	1075	1215	1005			45
1911. Males.....	666	195	65	122	169	224	255	409	539	670	482			31
Females.....	581	198	58	107	182	201	279	340	460	621	541			15
Total.....	1247	393	123	229	351	425	534	749	999	1291	1023			46
1912. Males.....	626	153	39	98	186	216	258	405	562	699	374	53	4	37
Females.....	479	166	61	92	175	234	247	344	484	632	439	72		11
Not stated.....	1													
Total.....	1106	319	100	190	361	450	505	749	1046	1331	813	125	4	48
1913. Males.....	728	194	67	94	168	206	291	400	533	644	373	56	3	38
Females.....	595	198	58	102	176	229	266	333	466	650	484	83	2	18
Total.....	1323	392	125	196	344	435	557	733	1019	1294	857	139	5	56

*Classed under over 80.

Table No. 45.

Percentage of Deaths, by Ages and Sex, to Total Mortality, from
1884 to 1913, inclusive.

Years.	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
1884. Males.....	16.00	8.45	2.51	4.73	7.79	5.84	6.26	8.52	11.20	17.46	10.16	1.04	.04
Females.....	11.74	7.05	2.99	6.38	8.84	7.31	7.02	7.81	11.17	14.76	12.60	2.33	....
Total.....	13.82	7.73	2.75	5.57	8.33	6.60	6.65	8.16	11.18	16.08	11.41	1.70	.02
1885. Males.....	14.78	8.00	2.20	3.87	6.75	6.43	6.75	8.96	14.00	16.99	10.09	1.14	.04
Females.....	12.07	7.06	2.21	5.34	8.95	7.65	7.35	7.32	11.55	15.07	12.95	2.41	.07
Total.....	13.37	7.51	2.21	4.64	7.95	7.07	7.07	8.10	12.72	15.98	11.58	1.80	.05
1886. Males.....	16.06	9.00	3.10	4.35	6.75	6.20	6.53	7.52	12.13	16.45	10.45	1.39	.07
Females.....	12.36	7.10	2.89	5.71	9.37	7.48	6.26	8.09	10.88	14.35	12.74	2.67	.10
Total.....	14.18	8.04	2.99	5.04	8.08	6.85	6.39	7.81	11.50	15.39	11.62	2.03	.08
1887. Males.....	16.20	7.64	2.35	4.69	6.48	6.08	6.15	8.40	12.46	16.92	11.11	1.49	.03
Females.....	13.19	7.58	1.94	5.55	8.09	7.01	7.58	7.80	11.35	15.67	11.10	2.95	.19
Total.....	14.67	7.61	2.14	5.13	7.30	6.56	6.88	8.09	11.90	16.28	11.10	2.23	.11
1888. Males.....	18.16	8.65	2.31	4.45	6.58	5.47	5.56	7.94	12.10	15.66	11.64	1.45	.03
Females.....	14.06	7.45	1.99	5.94	8.30	7.38	6.10	8.03	11.49	15.66	11.03	2.42	.15
Total.....	16.10	8.04	2.15	5.20	7.44	6.43	5.83	7.98	11.80	15.66	11.34	1.94	.09
1889. Males.....	17.44	8.75	2.93	4.26	6.09	6.05	5.70	7.84	12.40	16.01	11.13	1.40	....
Females.....	14.40	7.51	2.70	5.48	7.69	6.92	6.80	8.27	12.20	14.43	11.21	2.30	.09
Total.....	15.88	8.11	2.81	4.89	6.91	6.50	6.27	8.06	12.29	15.20	11.17	1.86	.05
1890. Males.....	17.44	7.15	2.09	4.09	6.55	6.93	6.30	8.82	12.08	16.49	10.54	1.49	....
Females.....	15.03	6.19	1.89	4.47	7.54	7.94	6.94	9.52	11.45	14.72	11.65	2.46	.14
Total.....	16.23	6.67	1.99	4.28	7.04	7.43	6.62	9.17	11.76	15.60	11.09	1.97	.07
1891. Males.....	20.15	7.34	2.47	3.84	7.11	5.91	6.02	8.00	12.56	15.15	9.92	1.49	....
Females.....	16.18	6.78	2.61	4.99	6.81	6.11	6.61	8.34	11.60	14.88	12.09	2.85	.08
Total.....	18.19	7.06	2.55	4.41	6.96	6.01	6.31	8.16	12.08	15.04	10.99	2.16	.04
1892. Males.....	18.29	6.74	2.12	4.16	5.88	6.07	6.12	8.38	13.48	16.94	10.66	1.07	.05
Females.....	14.11	6.56	2.25	4.63	7.51	7.20	7.09	9.13	12.38	14.50	12.22	2.33	.02
Total.....	16.17	6.64	2.18	4.39	6.70	6.63	6.60	8.76	12.91	15.69	11.44	1.70	.03
1893. Males.....	19.93	6.98	1.92	4.07	6.62	6.31	6.26	8.13	13.30	15.81	9.52	.97	.14
Females.....	15.76	7.27	1.95	4.58	7.68	6.92	7.44	8.07	10.68	14.75	11.83	2.69	.08
Total.....	17.83	7.13	1.93	4.32	7.20	6.62	6.94	8.10	11.98	15.14	10.69	1.84	.11
1894. Males.....	19.37	7.33	2.45	3.41	6.79	6.55	6.13	8.17	11.82	16.61	9.85	1.46	....
Females.....	15.66	7.58	2.50	4.36	7.32	7.50	6.58	8.90	11.38	15.31	10.94	2.18	.02
Total.....	17.47	7.31	2.47	3.90	7.06	7.04	6.36	8.54	11.59	15.95	10.41	1.83	.01
1895. Males.....	19.03	7.04	2.21	4.26	6.12	5.43	6.62	7.81	13.63	16.58	9.90	1.34	....
Females.....	15.11	7.09	1.98	4.16	7.84	6.20	6.72	8.56	11.03	16.45	12.32	2.41	.11
Total.....	17.03	7.07	2.09	4.21	6.99	5.82	6.67	8.19	12.31	16.52	11.13	1.88	.06
1896. Males.....	19.87	8.06	1.87	3.66	7.09	6.01	5.71	8.09	12.68	16.85	8.70	1.39	....
Females.....	16.10	7.77	2.19	4.94	7.12	6.96	6.59	8.89	12.20	14.46	10.16	2.62	....
Total.....	18.95	7.92	2.03	4.32	7.11	6.49	6.15	8.49	12.43	15.64	9.43	2.02	....
1897. Males.....	19.75	7.51	2.44	3.82	6.55	5.49	5.96	8.54	11.89	15.64	11.15	1.26	....
Females.....	14.19	6.89	2.74	3.70	7.69	8.52	6.30	8.38	12.74	15.27	11.26	2.31	....
Total.....	16.93	7.20	2.59	3.76	7.03	7.03	6.13	8.46	12.32	15.45	11.21	1.79	....
1898. Males.....	20.22	7.92	1.73	3.31	5.98	6.40	5.98	8.25	12.65	16.56	9.40	1.55	.05
Females.....	15.50	6.81	1.95	3.34	7.72	6.99	6.53	9.33	13.16	15.47	11.07	2.01	.12
Total.....	17.89	7.37	1.83	3.32	6.84	6.69	6.24	8.79	12.91	16.02	10.23	1.78	.09

Table No. 45.—*Concluded.*

Years.	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
1899. Males.....	19.05	8.51	2.13	3.16	6.09	5.14	6.76	8.19	12.24	17.18	10.52	.97	.06
Females.....	15.98	6.71	1.84	4.00	6.79	6.11	6.68	8.61	12.27	16.30	11.92	2.65	.14
Total.....	17.52	7.61	1.98	3.58	6.44	5.62	6.72	8.40	12.25	16.74	11.22	1.81	.10
1900. Males.....	19.37	8.15	2.44	3.17	6.30	5.63	6.38	8.45	13.28	15.98	9.39	1.30	.16
Females.....	15.15	7.29	2.15	4.32	7.21	6.42	6.58	9.14	11.98	15.40	11.82	2.49	.05
Total.....	17.23	7.72	2.29	3.75	6.75	6.03	6.48	8.79	12.62	15.70	10.62	1.91	.11
1901. Males.....	17.13	6.59	1.76	2.93	6.88	6.62	7.27	9.55	13.50	16.48	10.09	1.17	.03
Females.....	13.89	6.62	1.91	3.15	6.94	6.68	7.62	9.47	12.98	16.62	11.29	2.74	.09
Total.....	15.54	6.61	1.84	3.04	6.91	6.65	7.44	9.51	13.24	16.55	10.68	1.93	.06
1902. Males.....	17.78	7.19	2.09	3.12	6.33	6.27	6.75	9.15	13.47	16.73	9.53	1.88	.11
Females.....	14.61	7.12	1.93	3.86	6.04	6.57	7.55	9.64	13.63	15.15	11.60	2.22	.03
Total.....	16.21	7.16	2.02	3.49	6.19	6.42	7.14	9.39	13.55	15.96	10.59	1.81	.07
1903. Males.....	16.19	6.57	1.87	3.72	6.29	5.86	6.80	9.90	13.54	17.05	10.89	1.28	....
Females.....	14.13	6.49	2.31	3.17	7.09	6.20	7.15	9.01	14.25	16.83	11.79	2.67	.08
Total.....	15.07	6.48	2.07	3.57	6.62	5.97	6.91	9.39	13.77	16.79	11.34	1.97	.04
1904. Males.....	17.14	5.43	1.93	3.18	5.23	7.01	7.43	9.92	16.34	17.06	10.69	1.48	.08
Females.....	13.79	5.29	1.71	3.29	7.10	7.16	6.81	9.38	13.14	16.28	12.97	2.99	.05
Total.....	15.47	5.37	1.82	3.23	6.17	7.09	7.12	9.65	13.26	16.67	11.83	2.24	.07
1905. Males.....	17.88	6.92	2.28	3.20	5.13	5.88	7.88	9.25	13.73	16.23	10.23	1.38	....
Females.....	15.44	6.48	2.17	4.28	6.43	6.30	7.01	8.49	12.97	16.21	10.77	2.53	.13
Total.....	16.68	6.70	2.23	3.74	5.77	6.39	7.45	8.87	13.37	16.16	10.49	1.95	.07
1906. Males.....	20.67	6.34	2.00	3.67	4.66	6.05	6.74	8.75	13.12	16.57	9.74	1.68	....
Females.....	16.39	5.94	1.92	3.62	6.02	7.69	6.94	8.29	14.09	15.63	10.96	2.48	.02
Total.....	18.53	6.14	1.96	3.64	5.34	6.87	6.84	8.52	13.60	16.10	10.35	2.08	.01
1907. Males.....	18.92	5.66	1.56	3.28	5.21	5.84	7.00	9.12	14.17	17.59	10.37	1.22	.05
Females.....	16.47	4.65	2.09	3.20	5.35	6.72	7.16	9.00	13.02	18.33	11.43	2.53	.05
Total.....	17.74	5.17	1.82	3.25	5.27	6.26	7.09	9.06	13.61	17.94	10.88	1.84	.05
1908. Males.....	21.40	5.49	1.87	2.71	5.15	5.45	7.37	8.97	13.98	16.39	9.75	1.46	....
Females.....	16.37	5.62	1.37	3.38	6.00	6.29	7.22	9.44	12.18	17.30	11.77	3.03	.03
Total.....	18.98	5.56	1.63	3.03	5.56	5.86	7.30	9.19	13.11	16.83	10.72	2.22	.01
1909. Males.....	20.57	5.38	1.74	2.91	4.66	6.57	7.05	9.14	15.21	16.46	8.93	1.29	.02
Females.....	17.01	5.81	1.82	2.48	4.82	6.56	6.24	9.88	13.06	17.46	12.48	2.22	.02
Total.....	18.93	5.58	1.78	2.71	4.74	6.56	6.66	9.50	14.18	16.94	10.63	1.77	.02
1910. Males.....	20.67	5.01	1.85	2.58	5.30	5.35	6.89	10.39	14.57	16.50	10.89	....	....
Females.....	16.23	4.83	1.51	2.85	5.34	6.26	6.79	9.02	14.45	16.29	16.40	....	....
Total.....	18.53	4.93	1.69	2.71	5.32	5.79	6.84	9.73	14.51	16.39	13.56	....	....
1911. Males.....	17.49	5.14	1.71	3.22	4.45	5.90	6.72	10.78	14.21	17.66	12.70	....	....
Females.....	16.28	5.55	1.63	2.99	5.10	5.63	7.82	9.53	12.89	17.40	15.16	....	....
Total.....	16.94	5.33	1.67	3.11	4.76	5.77	7.25	10.17	13.57	17.54	13.89	....	....
1912. Males.....	17.04	4.17	1.07	2.67	5.06	5.88	7.02	11.03	15.30	19.03	10.16	1.44	.11
Females.....	13.98	4.85	1.78	2.69	5.11	6.84	7.21	10.04	14.13	18.45	12.82	2.10	....
Total.....	15.57	4.50	1.41	2.68	5.08	6.34	7.11	10.55	14.74	18.77	11.45	1.76	.05
1913. Males.....	19.27	5.14	1.77	2.49	4.45	5.45	7.70	10.59	14.64	17.05	9.88	1.48	.08
Females.....	16.34	5.44	1.59	2.80	4.83	6.29	7.30	9.14	12.79	17.85	13.29	2.28	.05
Total.....	17.83	5.28	1.68	2.64	4.64	5.86	7.51	9.88	13.74	17.45	11.55	1.88	.06

*Excluding those with age and sex not stated, and premature and still births.

Table No. 46.

Total Deaths by Seasons, 1912.*

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Months.....	679	629	693	598	592	504	549	584	595	523	585	614
Quarters.....	2,001			1,694			1,728			1,722		
Percentages.....	28.01			23.71			24.18			24.10		
Half years.....	3,695						3,450					
Percentages.....	51.72						48.28					
Total deaths.....	7,145											

* Not including deaths with month not stated, and still births.

Table No. 47.

Total Deaths by Seasons, 1913.*

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Months.....	701	672	663	606	587	602	637	689	634	522	554	606
Quarters.....	2,036			1,795			1,960			1,682		
Percentages.....	27.24			24.02			26.23			22.51		
Half years.....	3,831						3,642					
Percentages.....	51.26						48.74					
Total deaths.....	7,473											

* Not including deaths with month not stated, and still births.

Table No. 48.

Nativity of Persons Deceased from 1884 to 1913, inclusive.

Years.	Total deaths.*	Native born.		Foreign born.	
		Deaths.	Percentage.	Deaths.	Percentage.
1884.....	6,194	4,868	89.01	601	10.99
1885.....	6,201	4,847	89.35	578	10.65
1886.....	6,426	4,989	88.52	647	11.48
1887.....	6,479	5,131	88.03	698	11.97
1888.....	6,854	5,449	87.53	776	12.47
1889.....	6,696	5,383	88.00	734	12.00
1890.....	7,368	5,672	86.45	898	13.55
1891.....	7,310	5,637	86.52	878	13.47
1892.....	7,988	6,155	86.82	934	13.17
1893.....	7,663	5,847	85.03	1,029	14.97
1894.....	6,898	5,310	85.01	936	14.99
1895.....	6,929	5,428	85.05	954	14.95
1896.....	6,791	5,196	83.73	1,010	16.27
1897.....	7,027	5,387	83.95	1,030	16.05
1898.....	6,743	5,296	84.83	947	15.17
1899.....	7,045	5,482	84.01	1,043	15.99
1900.....	7,624	5,975	83.54	1,177	16.46
1901.....	6,975	5,417	82.64	1,138	17.36
1892.....	6,649	5,197	82.86	1,075	17.14
1903.....	6,969	5,361	81.66	1,204	18.34
1904.....	6,804	5,362	83.13	1,088	16.87
1905.....	7,339	5,734	82.07	1,253	17.93
1906.....	7,498	5,871	82.10	1,280	17.90
1907.....	7,486	5,368	75.29	1,761	24.71
1908.....	7,161	5,609	81.97	1,234	18.03
1909.....	7,282	5,643	81.05	1,319	18.95
1910.....	7,455	5,805	81.25	1,340	18.75
1911.....	7,410	5,742	81.27	1,323	18.73
1912.....	7,147	5,474	79.91	1,376	20.09
1913.....	7,475	5,741	80.20	1,417	19.80

*Including those whose nativity was not recorded. In the calculations of percentages the rates are not given to the *total* reported deaths, but only to the total of those cases where the nativity was stated.

Table 49.
Deaths from Various Causes for Thirty Years—1884-1913.

Years.	Typhoid fever.	Smallpox.	Measles.	Scarlet fever.	Whooping cough.	Diphtheria.	Membranous croup.	Influenza.	Dysentery.	Erysipelas.	Tuberculosis of lungs.	Cancer.	Meningitis.*	Apoplexy.	Paralysis.	Heart disease.	Bronchitis (acute and chronic).	Pneumonia.	Diarrhea and enteritis (cholera infantum).	Bright's disease.	Senile debility (old age).
1884	137	2	3	52	14	110	49	3	80	19	868	210	120	204	248	507	78	436	266	117	601
1885	136	2	45	53	25	78	74	6	40	25	857	213	133	206	278	489	112	504	219	130	587
1886	194	1	18	21	26	156	64	5	79	18	809	206	141	220	249	461	81	466	362	108	566
1887	134	1	39	26	21	177	84	9	53	20	766	218	117	210	253	552	114	556	336	122	527
1888	150	1	55	34	23	103	94	6	63	36	742	203	143	243	273	575	142	628	370	113	519
1889	161	1	16	18	47	210	88	4	67	27	651	213	151	259	196	564	127	582	353	156	530
1890	143	1	9	16	26	161	64	33	48	29	825	276	186	263	251	568	194	703	399	157	614
1891	170	1	19	13	27	160	56	155	51	43	695	222	161	283	241	572	180	673	486	174	593
1892	109	1	24	27	37	134	45	33	42	39	736	235	173	308	209	605	217	890	366	183	516
1893	121	1	32	52	23	63	36	91	63	29	737	283	208	331	239	685	191	685	423	159	496
1894	135	1	14	61	51	73	44	121	41	16	714	230	223	294	248	649	195	633	400	145	459
1895	99	4	7	58	26	78	49	121	39	18	693	266	227	321	252	691	187	639	411	188	453
1896	139	1	23	23	33	85	59	47	40	19	679	275	232	357	210	647	161	557	392	191	465
1897	92	1	12	34	16	82	61	130	28	22	697	265	233	345	229	647	241	650	320	232	485
1898	108	1	10	25	21	71	37	51	54	20	607	305	222	343	230	619	141	524	459	229	506
1899	92	1	15	20	74	55	47	170	26	20	582	279	219	376	251	685	185	753	364	242	478
1900	100	1	19	27	40	64	36	183	38	17	650	292	254	362	227	682	200	942	462	248	483
1901	89	5	4	50	20	60	30	139	37	20	629	364	207	340	241	692	162	716	368	242	480
1902	72	6	19	4	31	13	26	51	27	18	569	341	206	412	177	701	169	618	291	297	363
1903	86	1	13	9	31	77	25	80	20	10	530	314	201	431	197	744	127	686	328	348	424
1904	76	2	3	9	13	43	25	71	29	33	575	326	172	430	203	673	150	635	321	339	430
1905	56	1	24	2	30	60	17	98	33	14	571	344	352	453	174	690	142	690	392	428	380
1906	76	1	6	10	53	58	28	46	30	10	538	355	265	446	169	681	166	525	398	430	423
1907	49	1	8	7	21	76	19	110	12	12	465	386	217	523	210	750	209	602	297	387	369
1908	75	1	8	6	24	77	22	82	31	12	471	373	189	491	181	711	170	491	380	374	375
1909	48	1	16	18	27	60	12	68	17	17	466	383	188	484	184	784	177	580	393	402	359
1910	42	1	9	8	27	46	25	64	41	19	479	406	150	528	155	756	160	581	380	429	355
1911	53	1	11	16	31	52	15	71	24	9	433	408	114	508	157	717	170	613	366	439	337
1912	36	2	10	10	27	64	21	42	12	18	394	453	85	591	135	726	151	505	305	464	305
1913	50	2	55	13	24	45	15	51	10	12	425	453	98	487	101	777	129	556	392	420	296
Total.....	3,028	24	546	722	889	2,717	1,267	2,427	1,175	621	18,853	9,097	5,587	11,049	6,368	19,538	4,828	18,619	10,913	7,893	13,774

* Including cephalitis, cerebritis, and encephalitis.

CONSUMPTION (PULMONARY TUBERCULOSIS.)

Table No. 50.

Deaths from Consumption (Pulmonary Tuberculosis) in New Hampshire for Thirty Years, by Age Periods.

Years.	Total.	1 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.
1884.....	868	50	113	218	145	93	78	64	67	21	19
1885.....	857	49	98	219	161	109	75	75	43	19	9
1886.....	809	44	87	233	152	94	67	71	37	18	6
1887.....	766	34	88	193	145	101	78	55	46	21	5
1888.....	742	48	88	219	137	71	62	55	42	15	5
1889.....	651	36	81	147	120	77	56	65	53	10	6
1890.....	825	49	77	200	156	113	65	72	63	23	7
1891.....	695	47	87	174	131	89	67	37	43	10	10
1892.....	736	28	88	178	150	84	67	71	41	20	9
1893.....	737	45	71	204	139	92	65	64	34	14	9
1894.....	714	50	70	200	150	82	59	45	45	8	5
1895.....	693	31	66	210	129	85	60	49	51	10	2
1896.....	679	41	81	180	130	85	59	49	37	9	8
1897.....	697	36	79	225	143	70	46	49	32	12	5
1898.....	607	26	53	181	143	66	52	47	22	7	10
1899.....	582	26	57	169	103	80	65	38	28	10	6
1900.....	650	36	70	193	120	76	45	61	44	1	4
1901.....	629	42	57	178	130	71	53	48	40	7	3
1902.....	569	23	62	138	134	83	51	43	24	5	6
1903.....	530	26	47	141	107	66	54	49	31	7	2
1904.....	575	30	43	181	126	74	54	43	18	3	3
1905.....	571	28	54	143	131	95	49	45	20	3	3
1906.....	538	34	54	138	136	76	36	31	22	8	3
1907.....	465	19	39	125	111	67	46	29	21	6	2
1908.....	471	23	46	126	95	69	37	46	21	8	...
1909.....	466	19	41	116	121	68	42	34	19	5	1
1910.....	479	19	36	125	94	78	52	48	22	3	2
1911.....	433	12	48	113	103	63	39	33	16	4	2
1912.....	394	10	30	107	92	53	41	32	18	6	5
1913.....	425	12	31	103	90	90	49	21	17	8	4
Total.....	18,853	973	1,942	5,077	3,824	2,420	1,669	1,469	1,017	301	161

Table No. 51.

Mortality from Consumption 1884 to 1913, inclusive.*

Years.	Deaths.	Percentages of deaths to deaths from all causes.	Death rate per 10,000 living population. (estimated).
1884.....	868	14.01	24.10
1885.....	857	13.82	23.68
1886.....	809	12.58	22.17
1887.....	766	11.82	20.82
1888.....	742	10.82	20.01
1889.....	651	9.72	17.42
1890.....	825	11.19	21.91
1891.....	695	9.51	18.31
1892.....	736	9.21	19.24
1893.....	737	9.62	19.13
1894.....	714	10.35	18.38
1895.....	693	10.00	17.71
1896.....	679	9.99	17.22
1897.....	697	9.92	17.55
1898.....	607	9.00	15.16
1899.....	582	8.26	14.43
1900.....	650	8.20	15.79
1901.....	629	9.02	15.21
1902.....	569	8.55	13.69
1903.....	530	7.57	12.70
1904.....	575	8.45	13.71
1905.....	571	7.78	13.56
1906.....	538	7.17	12.71
1907.....	465	6.21	10.94
1908.....	471	6.57	11.03
1909.....	466	6.39	10.87
1910.....	479	6.42	11.12
1911.....	433	5.84	10.01
1912.....	394	5.51	9.07
1913.....	425	5.68	9.74
Total.....	18,853		

*Population estimated for all but census years.

Table No. 52.

Deaths from Consumption by Nativity, Civil Condition and Sex,
by Counties, for 1912.

Counties.	Sex.	American.	Foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.	Total.	Grand total.
Rockingham.....	Males.....	32	6	.....	19	16	2	1	38	57
	Females.....	16	3	.....	6	10	3	.....	19	
Strafford.....	Males.....	14	4	2	9	5	*2	4	20	40
	Females.....	15	4	1	4	3	12	1	20	
Belknap.....	Males.....	5	1	1	5	1	.....	1	7	11
	Females.....	2	1	1	2	.....	2	.....	4	
Carroll.....	Males.....	1	.....	1	1	.....	.....	1	2	6
	Females.....	4	.....	.....	3	1	.....	.....	4	
Merrimack.....	Males.....	19	5	.....	5	15	†2	2	24	49
	Females.....	20	4	1	14	8	2	1	25	
Hillsborough.....	Males.....	36	23	.....	22	24	10	3	59	114
	Females.....	25	30	.....	32	15	4	4	55	
Cheshire.....	Males.....	10	6	1	6	8	1	2	17	37
	Females.....	12	6	2	14	3	2	1	20	
Sullivan.....	Males.....	2	2	1	3	2	.....	.....	5	11
	Females.....	5	1	.....	3	3	.....	.....	6	
Grafton.....	Males.....	18	4	2	12	9	3	.....	24	43
	Females.....	17	2	.....	13	4	2	.....	19	
Coos.....	Males.....	4	4	2	3	5	.....	2	10	26
	Females.....	9	6	1	10	4	1	1	16	
Total for state Males.....		141	55	10	85	85	20	16	206	394
Females.....		125	57	6	101	51	28	8	188	
Grand total.....		266	112	16	186	136	48	24	394	

*One divorced.

†Two divorced.

Table No. 53.

Deaths from Consumption by Nativity, Civil Condition and Sex,
by Counties, for 1913.

Counties.	Sex.	American.	Foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.	Total.	Grand Total.
Rockingham.....	Males.....	13	7	.....	14	4	2	.....	20	48
	Females.....	24	3	1	11	9	*8	.....	28	
Strafford.....	Males.....	14	6	1	17	3	*1	.....	21	41
	Females.....	15	5	.....	10	7	3	.....	20	
Belknap.....	Males.....	7	3	1	6	5	.....	.....	11	14
	Females.....	3	.....	.....	2	1	.....	.....	3	
Carroll.....	Males.....	4	2	1	6	.....	.....	1	7	13
	Females.....	6	.....	.....	5	.....	1	.....	6	
Merrimack.....	Males.....	17	18	1	18	11	*7	.....	36	62
	Females.....	17	9	.....	12	7	*6	1	26	
Hillsborough.....	Males.....	30	38	3	37	30	3	1	71	155
	Females.....	36	47	1	49	27	*7	1	84	
Cheshire.....	Males.....	9	5	3	8	7	1	1	17	24
	Females.....	4	3	.....	5	2	.....	.....	7	
Sullivan.....	Males.....	6	5	.....	8	2	1	.....	11	17
	Females.....	4	2	.....	4	2	.....	.....	6	
Grafton.....	Males.....	12	1	1	5	8	1	.....	14	29
	Females.....	10	5	.....	8	5	2	.....	15	
Coös.....	Males.....	8	1	2	2	7	1	1	11	22
	Females.....	4	7	.....	8	3	.....	.....	11	
Total for state Males.....		120	86	13	121	77	17	4	219	425
Females.....		123	81	2	114	63	27	2	206	
Grand total.....		243	167	15	235	140	44	6	425	

*One divorced.

Table No. 54.

Mortality from Consumption by Counties, with Percentages of Deaths to Total Mortality, from 1884 to 1913, inclusive.

Counties.	1884.		1885.		1886.		1887.		1888.		1889.		1890.		1891.		1892.		1893.		1894.		1895.		1896.		1897.		1898.	
	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.
Rockingham...	130	14.89	134	14.70	142	14.74	130	14.84	96	10.71	88	10.05	134	12.58	85	8.57	133	12.96	113	10.94	101	11.21	99	10.88	92	10.50	96	10.53	84	9.95
Strafford	105	16.74	95	15.50	96	15.76	80	11.88	93	13.51	75	10.85	117	14.60	94	11.62	84	9.72	78	10.51	78	12.64	65	10.42	65	9.63	93	12.93	73	10.32
Belknap	54	18.94	50	17.30	37	10.22	48	13.00	46	11.73	42	10.79	40	10.69	44	11.23	35	7.95	47	12.74	43	11.28	32	9.46	31	8.96	37	11.14	28	8.07
Carroll	46	13.81	33	12.26	41	13.53	33	11.22	26	7.92	29	9.73	25	8.25	32	9.38	36	10.53	36	11.80	26	8.69	26	8.75	21	7.39	29	10.28	30	10.83
Merrimack	91	12.36	102	12.81	79	9.48	96	11.49	101	10.97	88	9.87	114	11.59	89	9.36	100	9.40	108	10.16	112	11.75	91	9.78	79	8.91	71	8.14	75	9.06
Hillsborough	229	13.83	233	13.69	218	12.96	179	10.55	209	11.32	168	9.64	204	10.33	197	10.06	175	8.56	190	9.03	194	10.19	182	9.19	234	11.61	193	9.43	176	9.26
Cheshire	62	12.47	75	15.18	60	12.63	50	10.37	47	9.63	53	10.09	51	9.15	49	10.16	56	9.21	48	8.06	48	9.34	50	9.76	39	8.90	50	10.44	38	7.61
Sullivan	36	13.18	36	12.67	45	13.72	32	11.30	36	11.00	28	8.91	32	9.63	20	7.15	27	7.07	32	8.84	32	9.81	40	12.66	39	13.65	31	9.84	30	9.80
Grafton	83	12.73	70	11.45	72	11.72	80	13.28	63	9.61	58	9.27	70	10.75	57	8.79	58	7.77	53	7.61	52	8.15	71	10.43	51	8.04	63	9.14	46	7.21
Coös	32	12.16	28	12.33	19	7.42	38	10.32	25	7.96	22	6.32	38	11.51	28	6.10	32	7.60	32	8.10	28	7.63	37	10.85	28	8.19	34	8.92	27	6.77
Total	868	14.01	857	13.82	809	12.58	766	11.82	742	10.82	651	9.72	825	11.19	695	9.51	736	9.21	737	9.62	714	10.35	693	10.00	679	9.99	697	9.92	607	9.00

Table No. 54.—Concluded.

Counties.	1899.		1900.		1901.		1902.		1903.		1904.		1905.		1906.		1907.		1908.		1909.		1910.		1911.		1912.		1913.	
	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.
Rockingham....	78	8.91	83	8.91	73	8.13	78	8.87	66	7.70	83	10.17	71	7.90	72	8.20	79	8.47	68	7.79	63	7.61	54	6.10	47	5.07	57	6.43	48	5.92
Strafford.....	67	9.18	75	9.61	76	11.83	73	12.22	64	10.06	69	10.45	48	6.75	56	8.34	45	6.75	55	8.52	46	7.16	67	9.72	48	7.64	40	6.00	41	6.36
Belknap.....	27	7.58	39	10.43	28	8.05	28	8.28	33	8.75	22	6.83	18	5.04	30	7.37	23	6.42	27	7.73	22	6.12	22	5.63	17	5.20	11	2.95	14	3.68
Carroll.....	19	6.55	24	7.92	23	10.95	23	8.81	17	6.11	22	9.01	25	8.99	15	5.57	12	4.37	21	8.20	19	7.48	16	5.46	10	3.36	6	2.50	13	4.59
Merrimack...	67	7.33	65	6.06	67	7.86	78	9.11	64	6.74	65	6.88	82	8.71	60	6.01	66	6.56	59	6.03	80	7.78	67	6.48	73	7.01	49	4.80	62	5.86
Hillsborough...	191	9.59	206	9.59	210	9.93	157	7.69	159	8.04	182	9.46	199	8.71	183	7.94	136	6.10	134	6.48	147	6.37	159	7.21	146	6.44	114	5.56	155	6.65
Cheshire.....	36	6.88	46	9.28	46	8.61	26	5.97	30	6.55	40	7.61	39	7.67	35	7.07	28	5.34	31	6.02	26	5.46	25	4.66	15	3.24	37	7.41	24	4.76
Sullivan.....	18	6.62	24	7.23	27	8.44	22	8.15	21	6.73	17	6.18	20	6.87	27	9.34	18	5.71	22	6.07	11	3.53	20	5.98	20	6.21	11	3.12	17	5.44
Grafton.....	53	8.01	63	8.76	42	6.20	56	9.16	45	6.64	40	6.30	42	6.75	37	4.97	39	5.52	31	4.56	27	3.91	34	5.15	37	5.39	43	5.93	29	4.20
Coös.....	26	5.99	25	5.75	37	9.78	28	7.71	31	6.93	35	7.76	27	6.50	23	5.16	19	3.95	23	4.84	25	6.37	15	3.34	20	4.44	26	5.86	22	3.19
Total.....	582	8.26	650	8.20	629	9.02	569	8.55	530	7.57	575	8.45	571	7.78	538	7.17	465	6.21	471	6.57	466	6.39	479	6.42	433	5.84	394	5.51	425	5.68

Table No. 55.

Percentage of Deaths from Consumption to the Total Mortality of the Cities of the State, for the Years 1883 to 1913, inclusive.

	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.
Manchester	14.59	14.28	13.03	15.01	11.15	12.37	9.30	10.29	10.40	8.77	8.49	9.44	8.24	12.08	10.16	9.01	9.84	10.47	9.48	7.38	7.41	8.90	8.33	7.49	5.91	7.89	6.82	7.05	6.29	4.93	6.65
Concord	11.41	8.66	10.68	8.60	10.13	10.23	9.81	9.13	9.30	8.43	9.15	11.69	9.01	9.09	6.73	6.78	6.65	5.45	8.89	7.97	6.07	7.42	9.43	6.54	6.50	5.60	8.20	7.31	6.88	3.33	4.00
Nashua	16.96	13.72	14.86	10.49	9.73	8.20	8.64	10.69	10.29	6.47	7.69	8.57	7.96	8.43	12.25	10.61	8.39	9.05	9.95	10.51	9.66	10.75	12.07	6.88	7.33	4.08	4.60	8.69	6.07	3.78	4.62
Dover	20.97	16.60	16.17	21.17	14.57	12.01	10.31	16.40	12.01	11.18	13.03	14.28	11.06	10.25	9.97	10.49	12.33	10.48	10.69	8.00	8.41	11.61	7.95	8.40	6.81	10.74	9.87	8.89	8.87	4.94	7.94
Portsmouth	16.02	14.74	12.18	17.84	16.26	13.26	7.73	14.34	8.17	17.61	10.08	13.66	21.11	13.66	14.59	9.33	9.39	9.75	8.41	5.50	8.78	17.08	9.89	8.19	9.69	9.40	7.34	4.94	4.09	4.97	6.79
Keene	16.91	16.00	22.80	16.00	11.90	9.47	9.62	10.25	11.90	13.77	9.43	10.34	11.11	9.01	9.02	11.36	6.76	11.46	10.65	4.16	6.06	9.33	8.92	5.42	5.00	4.40	8.27	5.05	2.76	4.81	3.64
Rochester									11.80	9.70	5.31	10.08	11.36	8.47	15.09	13.01	13.75	10.63	18.80	21.60	11.97	12.66	10.96	4.13	5.12	8.00	3.90	9.65	5.17	9.02	4.31
Laconia										7.75	11.49	15.00	9.28	12.24	13.53	12.69	9.03	13.04	11.24	8.82	10.36	9.85	5.22	9.74	7.92	13.79	8.23	5.88	7.14	3.73	3.35
Somersworth										11.68	11.20	8.54	8.33	10.94	17.01	9.09	4.91	10.15	7.50	14.87	8.77	10.78	5.40	5.26	7.69	6.12	8.16	9.67	6.52	7.92	5.82
Franklin												11.11	7.02	13.89	9.52	8.33	8.82	5.00	7.14	10.22	7.52	6.89	10.58	9.30	6.17	7.95	5.94	7.00	2.17	3.84	6.38
Berlin														5.05	5.26	1.84	5.26	4.85	10.56	6.14	4.73	4.37	3.55	5.37	1.91	3.66	5.75	7.36	3.72	4.27	2.74

PNEUMONIA.

Table No. 56.

Mortality from Pneumonia in New Hampshire from 1883 to 1913, inclusive, by Ages.

Years.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1883	82		5	8	12	30	21	36	45	86	94	66	13	498
1884	51	48	3	3	6	27	23	30	36	50	97	54	8	436
1885	69	49	8	4	11	15	27	32	37	72	105	74	1	504
1886	57	38	13	6	13	17	24	29	49	68	92	53	7	466
1887	68	33	7	5	13	28	32	40	48	89	121	68	4	556
1888	67	45	6	10	19	40	49	51	62	67	123	81	8	628
1889	61	50	8	12	17	29	36	40	48	98	100	79	4	582
1890	73	48	9	10	11	35	46	45	79	106	127	107	7	703
1891	73	43	15	6	11	43	31	38	74	109	126	95	9	673
1892	77	49	13	6	12	41	61	60	95	147	190	128	11	890
1893	86	65	15	5	15	36	39	55	60	95	120	88	6	685
1894	88	62	13	4	11	29	38	48	63	87	103	83	4	633
1895	69	62	11	8	16	27	32	46	57	101	127	74	9	639
1896	103	96	8	5	10	22	29	35	34	68	82	63	2	557
1897	122	82	13	7	9	22	36	33	56	78	100	87	5	650
1898	84	68	12	7	9	25	35	34	31	59	101	55	4	524
1899	130	97	19	9	19	25	39	46	50	85	129	99	6	753
1900	142	125	14	11	18	48	64	76	95	112	141	88	8	942
1901	105	82	13	3	9	41	35	65	55	78	136	89	5	716
1902	118	86	14	7	10	35	31	32	51	76	82	73	3	618
1903	127	87	19	11	17	26	42	40	54	85	95	78	5	686
1904	94	68	12	6	12	27	46	40	60	65	116	84	5	635
1905	110	86	13	6	16	26	36	51	54	76	110	100	6	690
1906	63	46	9	7	10	18	25	37	61	80	97	63	9	525
1907	72	47	11	9	14	26	36	47	47	89	128	74	2	602
1908	62	48	11	5	4	24	23	40	44	73	84	71	2	491
1909	85	53	12	7	17	31	47	33	44	85	91	71	4	580
1910	69	44	7	5	9	33	40	38	71	96	96	72	1	581
1911	72	56	11	13	5	22	30	39	64	114	112	70	5	613
1912	65	56	4	2	7	24	25	41	55	67	91	65	3	505
1913	73	52	9	4	16	21	30	50	60	66	102	72	1	556
Total	2617	1871	337	211	378	893	1108	1327	1739	2627	3418	2424	167	19,117

Table No. 57.

**Mortality from Pneumonia by Months from 1884 to 1913,
inclusive.**

Years.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Not stated.
1884.....	55	55	51	52	32	13	14	11	5	28	51	67	2
1885.....	53	59	101	95	35	25	13	10	10	33	38	32	....
1886.....	32	44	73	51	51	33	22	18	18	24	46	54	....
1887.....	71	73	85	85	49	17	13	13	14	34	47	54	1
1888.....	72	95	75	73	76	24	16	23	21	43	36	72	2
1889.....	69	66	79	102	51	22	15	19	16	53	41	49	....
1890.....	213	74	69	43	47	35	18	9	23	23	69	79	1
1891.....	73	60	82	72	95	41	13	7	14	23	37	152	4
1892.....	384	110	83	86	57	21	5	11	19	21	34	54	5
1893.....	75	71	95	87	67	38	18	14	14	24	48	133	1
1894.....	141	91	66	75	57	30	16	17	18	27	47	47	1
1895.....	89	91	141	78	34	29	14	15	16	29	35	66	2
1896.....	62	63	167	58	61	27	25	12	22	53	38	69	....
1897.....	84	87	261	67	48	30	15	8	22	33	41	54	....
1898.....	58	57	48	67	80	26	11	11	19	24	44	78	1
1899.....	168	114	82	91	44	25	28	17	24	35	28	97	....
1900.....	124	91	145	226	104	45	19	20	21	35	49	63	....
1901.....	79	134	126	81	67	35	10	14	13	37	49	71	....
1902.....	72	75	68	73	69	32	16	18	29	33	52	81	....
1903.....	93	111	89	66	64	23	29	17	18	35	62	79	....
1904.....	75	101	117	74	45	14	16	12	28	38	47	68	....
1905.....	97	125	116	82	52	25	27	12	22	30	51	51	....
1906.....	73	72	87	58	37	21	13	7	17	34	39	67	....
1907.....	124	84	72	67	53	33	14	10	21	31	39	54	....
1908.....	83	55	63	67	43	22	7	10	18	30	44	49	....
1909.....	52	83	102	74	61	36	19	9	21	30	45	48	....
1910.....	90	87	84	73	56	25	10	14	13	24	43	62	....
1911.....	87	89	109	66	54	27	12	21	19	36	43	50	....
1912.....	70	84	76	58	34	24	7	7	19	29	37	60	....
1913.....	86	106	95	49	35	33	23	16	23	21	25	44	....
Total.....	2904	2507	2707	2296	1658	831	478	402	557	950	1305	2004	20

Table No. 58.
Mortality from Pneumonia by Counties from 1883 to 1913, inclusive.

Counties.	Years.																										Grand total.					
	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908		1909	1910	1911	1912	1913
Rockingham.....	54	45	63	77	70	83	66	90	77	96	88	83	83	65	83	62	83	110	110	74	66	71	86	76	75	54	62	74	86	73	61	.....
Strafford.....	39	39	48	37	46	52	38	80	73	96	65	66	58	64	68	56	75	129	61	39	60	51	70	39	47	41	57	51	60	34	43	.....
Belknap.....	30	18	24	25	44	50	37	42	28	55	31	46	29	28	27	33	30	48	28	26	39	27	35	24	25	28	22	24	26	25	30	.....
Carroll.....	9	30	27	15	33	46	49	37	42	50	19	32	28	22	28	23	41	36	17	20	29	23	34	29	30	32	21	40	33	23	26	.....
Merrimack.....	76	50	72	60	85	73	86	94	73	137	95	85	83	73	70	53	86	157	80	83	93	89	73	68	85	68	91	64	80	53	86	.....
Hillsborough.....	141	110	128	112	128	129	131	158	185	175	159	154	175	159	189	154	228	236	220	205	201	177	213	153	162	112	163	165	169	137	122	.....
Cheshire.....	34	36	52	39	55	55	52	44	54	86	64	50	44	25	38	30	61	61	44	28	36	42	57	32	40	34	46	39	46	33	51	.....
Sullivan.....	21	21	22	23	22	30	31	32	31	62	45	31	32	23	36	25	37	37	36	31	40	41	18	20	27	24	33	41	25	23	24	.....
Grafton.....	68	66	48	54	52	77	64	74	53	84	71	53	66	61	75	54	59	81	74	67	72	65	49	52	55	54	48	48	54	62	63	.....
Coös.....	26	21	20	24	21	33	26	52	57	49	48	33	41	37	36	34	53	47	46	45	50	49	55	32	56	44	37	35	34	42	50	.....
Total.....	498	436	504	466	556	628	582	703	673	890	685	633	639	557	650	524	753	942	716	618	686	635	690	525	602	491	580	581	613	505	556	19,117

DIPHTHERIA AND MEMBRANOUS CROUP.

Table No. 59.

Mortality from Croup and Diphtheria, from 1884 to 1913, inclusive.

Years.	Deaths.			Percentage of deaths to deaths from all other causes.			Death rates per 10,000 *living.		
	Croup.	Diphtheria.	Total.	Croup.	Diphtheria.	Total.	Croup.	Diphtheria.	Total.
1884.....	49	110	159	.79	1.77	2.56	1.36	3.06	4.42
1885.....	74	78	152	1.19	1.25	2.44	2.04	2.15	4.19
1886.....	64	156	220	.99	2.41	3.40	1.75	4.27	6.02
1887.....	84	177	261	1.29	2.73	4.02	2.28	4.81	7.09
1888.....	94	103	197	1.37	1.50	2.87	2.53	2.77	5.30
1889.....	88	210	298	1.31	3.13	4.44	2.35	5.61	7.96
1890.....	64	164	228	.86	2.21	3.08	1.69	4.32	6.02
1891.....	56	160	216	.79	2.20	2.10	1.48	4.22	5.69
1892.....	45	134	179	.56	1.69	2.25	1.18	3.50	4.68
1893.....	36	63	99	.47	.82	1.29	.93	1.63	2.57
1894.....	44	73	117	.64	1.05	1.69	1.13	1.88	3.01
1895.....	49	78	127	.71	1.12	1.83	1.25	1.99	3.25
1896.....	59	85	144	.87	1.25	2.12	1.49	2.16	3.65
1897.....	61	82	143	.87	1.17	2.04	1.53	2.06	3.59
1898.....	37	71	108	.55	1.05	1.60	.92	1.77	2.69
1899.....	47	55	102	.66	.78	1.44	1.16	1.36	2.52
1900.....	36	64	100	.47	.84	1.31	.87	1.55	2.42
1901.....	30	60	90	.43	.86	1.29	.72	1.45	2.17
1902.....	26	136	162	.39	2.04	2.43	.62	3.28	3.90
1903.....	25	77	102	.36	1.10	1.46	.59	1.85	2.44
1904.....	25	43	68	.36	.63	.99	.59	1.03	1.62
1905.....	17	60	77	.23	.81	1.04	.40	1.42	1.82
1906.....	28	58	86	.37	.77	1.14	.66	1.37	2.03
1907.....	19	76	95	.25	1.01	1.26	.44	1.79	2.23
1908.....	22	77	99	.31	1.07	1.38	.51	1.80	2.31
1909.....	12	60	72	.16	.82	.98	.28	1.39	1.67
1910.....	25	46	71	.33	.62	.95	.58	1.06	1.64
1911.....	15	52	67	.20	.70	.90	.34	1.20	1.54
1912.....	21	64	85	.29	.89	1.18	.48	1.47	1.95
1913.....	15	45	60	.20	.60	.80	.34	1.03	1.37
Total.....	1,267	2,717	3,984						
Average.....	42	90	132	.60	1.29	1.89	1.08	2.31	3.39

* Estimated population.

TYPHOID FEVER.

Table No. 60.

Deaths from Typhoid Fever, by Age Periods, from 1884 to 1913, inclusive.

Years.	1 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.	Total.
1884.....	22	32	34	12	8	7	8	8	3	3	137
1885.....	16	31	34	14	8	7	10	11	3	2	136
1886.....	23	45	51	16	12	15	14	16	2	.....	194
1887.....	9	38	41	17	8	7	6	5	2	1	134
1888.....	20	37	39	12	8	8	9	8	3	6	150
1889.....	18	40	50	13	14	10	5	6	4	1	161
1890.....	14	35	33	18	14	10	7	7	3	2	143
1891.....	18	39	52	17	15	8	9	8	3	1	170
1892.....	11	27	24	18	8	5	6	3	4	3	109
1893.....	12	32	29	22	10	5	5	3	1	2	121
1894.....	13	24	39	19	11	9	10	8	2	.....	135
1895.....	5	26	28	10	12	4	7	3	1	3	99
1896.....	18	24	47	21	6	6	10	5	1	1	139
1897.....	12	22	22	12	8	10	4	1	1	.....	92
1898.....	9	25	36	14	11	7	3	2	.....	1	108
1899.....	5	16	34	13	7	4	7	3	1	2	92
1900.....	7	17	38	13	9	4	5	3	1	3	100
1901.....	11	11	19	20	10	9	6	2	1	.....	89
1902.....	8	18	17	12	6	3	4	1	1	2	72
1903.....	7	17	26	13	5	4	6	8	.....	.....	86
1904.....	5	13	22	17	7	2	4	5	1	.....	76
1905.....	5	14	12	9	7	5	4	.....	.....	.....	56
1906.....	7	13	18	16	10	5	4	2	.....	1	76
1907.....	2	9	8	14	6	2	5	1	.....	2	49
1908.....	8	11	22	15	12	7	.....	.....	.....	.....	75
1909.....	4	10	9	9	6	6	4	.....	.....	.....	48
1910.....	2	7	13	9	4	1	2	4	.....	.....	42
1911.....	4	6	13	10	8	7	2	2	1	.....	53
1912.....	1	10	8	6	1	7	2	.....	.....	1	36
1913.....	4	12	11	5	11	2	4	.....	.....	1	50
Total.....	300	661	829	416	262	186	172	125	39	38	3,028

Table No. 61.

Typhoid Fever—Mortality from to Each 10,000 of the Population of Same Age Period for Thirty Years, from 1884 to 1913, inclusive.

1 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.
1.47	3.22	3.99	2.56	1.88	1.68	2.19	2.75	2.56	.....

SCARLET FEVER.

Table No. 62.

Mortality from Scarlatina from 1884 to 1913, inclusive.

Years.	Deaths.	Percentages of deaths to deaths from all causes.	Death rates per 10,000 living population.*
1884	52	.83	1.44
1885	53	.85	1.46
1886	21	.32	.57
1887	26	.40	.70
1888	34	.49	.91
1889	18	.26	.48
1890	16	.21	.42
1891	13	.18	.34
1892	27	.33	.71
1893	52	.67	1.35
1894	61	.88	1.57
1895	58	.83	1.48
1896	23	.34	.58
1897	34	.48	.86
1898	25	.37	.62
1899	20	.28	.49
1900	27	.35	.65
1901	50	.72	1.20
1902	4	.06	.09
1903	9	.13	.21
1904	9	.13	.21
1905	2	.02	.04
1906	10	.13	.23
1907	7	.09	.16
1908	6	.08	.14
1909	18	.24	.41
1910	8	.10	.18
1911	16	.21	.36
1912	10	.13	.23
1913	13	.17	.38
Total	722		
Average	24		

*Estimated population.

Table No. 63.

Deaths from Heart Disease, 1884 to 1913.

Years.	Number of deaths.	Rate per 10,000 to estimated population.
1884	507	14.12
1885	489	13.51
1886	510	13.98
1887	552	15.01
1888	575	15.51
1889	564	15.09
1890	568	15.08
1891	572	15.05
1892	571	14.89
1893	605	15.64
1894	649	16.63
1895	691	17.55
1896	647	16.28
1897	647	16.14
1898	619	15.30
1899	685	16.79
1900	682	16.56
1901	692	16.66
1902	701	16.73
1903	747	17.67
1904	673	15.79
1905	690	16.05
1906	681	15.70
1907	750	17.15
1908	711	16.13
1909	784	18.28
1910	756	17.55
1911	717	16.57
1912	726	16.71
1913	777	17.81

CANCER.

Table No. 64.

Table Showing Deaths in New Hampshire from Cancer for Thirty Years.

Year.	Deaths from cancer.	Year.	Deaths from cancer.	Year.	Deaths from cancer.
1884	210	1894	230	1903	314
1885	213	1895	266	1904	326
1886	206	1896	275	1905	344
1887	218	1897	265	1906	354
1888	203	1898	305	1907	386
1889	213	1899	279	1908	373
1890	276	1900	292	1909	383
1891	222	1901	364	1910	406
1892	235	1902	341	1911	408
1893	283			1912	453
				1913	453

Table No. 65.

Deaths from Cancer by Age Periods and Sex from 1884 to 1913,
inclusive.

Years.	1 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.	Total.	Male.	Female.
1884.....	4	1	3	12	28	42	48	50	19	3	210	71	139
1885.....		1		11	30	42	57	56	13	3	213	74	139
1886.....			3	9	17	36	63	48	28	2	206	56	150
1887.....	2	1	3	11	31	46	50	46	23	5	218	70	148
1888.....		1	1	8	27	48	58	41	15	4	203	66	137
1889.....	2	1	3	12	24	36	55	57	22	1	213	70	143
1890.....	2		4	14	37	65	67	60	23	4	276	86	190
1891.....	1		4	17	24	43	64	47	21	1	222	74	148
1892.....	1		5	15	35	51	62	48	15	3	235	69	166
1893.....		1	4	9	48	63	66	55	31	6	283	106	177
1894.....		1	6	15	31	43	63	53	16	2	230	80	150
1895.....		2	2	12	38	49	62	76	25		266	100	166
1896.....	3	2	3	15	31	52	77	63	26	3	275	84	191
1897.....		2	4	25	30	54	62	62	21	5	265	87	178
1898.....			3	16	35	81	75	63	26	2	305	102	203
1899.....		3	3	11	36	69	69	56	28	4	279	89	190
1900.....	1	3	6	16	26	62	84	71	22	1	292	88	204
1901.....	1		5	20	46	74	104	87	24	3	364	114	250
1902.....	1	2	1	15	44	89	90	61	36	2	341	120	221
1903.....	1		2	20	25	74	96	67	27	2	314	110	204
1904.....		2	2	14	40	59	95	77	31	6	326	111	215
1905.....			4	15	48	71	90	93	23		344	126	218
1906.....	2		2	26	48	62	107	78	29		354	109	245
1907.....	2		3	24	60	78	93	81	42	3	386	123	263
1908.....	1		4	25	51	84	95	85	26	2	373	126	247
1909.....	2		2	17	49	79	107	89	36	2	383	131	252
1910.....	3	3	3	20	53	90	92	96	44	2	406	155	251
1911.....	3	1	4	10	66	79	106	97	38	4	408	138	270
1912.....		1	3	25	49	105	134	100	35	1	453	176	277
1913.....		1	3	15	49	104	105	115	59	2	453	164	289
Total.....	32	29	95	474	1156	1930	2400	2078	824	78	9096	3075	6021

APOPLEXY.

Table No. 67.

Deaths from Apoplexy by Age Periods, from 1884 to 1913,
inclusive.

Years.	1 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.	Total.	Rate to total population.* (Per 10,000.)
1884.....	6	1	3	14	8	21	52	61	34	4	204	5.68
1885.....	2	1	4	12	16	26	44	69	30	2	206	5.69
1886.....	2	1	1	12	16	24	48	81	32	3	220	6.03
1887.....	3		5	11	14	24	56	53	43	1	210	5.71
1888.....	4		3	6	12	19	59	75	64	1	243	6.55
1889.....	2		6	4	16	43	65	74	48	1	259	6.93
1890.....	1	1	3	6	19	38	58	82	50	5	263	6.98
1891.....	7	1	8	10	22	31	61	90	49	4	283	7.44
1892.....			1	5	20	50	73	93	57	9	308	8.03
1893.....	3		5	9	21	37	82	108	61	5	331	8.55
1894.....	2	1	3	4	12	42	79	105	44	2	294	7.53
1895.....	1	2	6	9	16	45	67	112	59	4	321	8.15
1896.....	2		5	8	21	52	90	116	59	4	357	8.93
1897.....	3		9	8	15	48	76	104	77	5	345	8.60
1898.....	4		4	7	20	53	73	112	68	2	343	8.48
1899.....	2	2	4	9	30	53	83	126	63	4	376	9.21
1900.....	2	1	6	7	18	55	87	105	72	9	362	8.79
1901.....	1	2	4	13	28	33	92	102	58	2	340	8.22
1902.....	12		5	5	25	53	105	136	67	4	412	9.91
1903.....	10	2	8	14	35	63	99	117	81	2	431	10.32
1904.....	13	1	2	13	25	66	97	126	82	5	430	10.25
1905.....	9	5	3	11	30	61	122	125	84	3	453	10.75
1906.....	8	3	7	7	27	63	95	147	85	4	446	10.54
1907.....	11	1	7	11	26	71	133	158	101	4	523	12.30
1908.....	12	3	3	12	26	82	108	143	99	3	491	11.50
1909.....	7	2	6	8	26	70	135	146	80	4	484	11.29
1910.....	11	2	6	21	30	63	143	145	103	4	528	12.26
1911.....	5	1	2	11	29	83	116	168	90	3	508	11.17
1912.....	9		2	17	24	75	144	199	117	4	591	13.60
1913.....	4	1	3	7	33	63	110	161	103	2	487	11.16
Total.....	158	34	134	291	660	1512	2652	3439	2060	109	11049	

*Population estimated for all but census years.

Table No. 68.

Deaths from Bright's Disease by Age Periods, 1884 to 1913,
inclusive.

Years.	1 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.	Total.	Rate to total population.* (Per 10,000.)
1884	6	6	9	13	12	23	20	23	3	2	117	3.26
1885	6	9	11	19	15	14	24	24	7	1	130	3.59
1886	3	2	9	8	8	10	28	33	6	1	108	2.96
1887	4	6	6	17	12	16	29	25	6	1	122	3.31
1888	9	3	6	3	15	20	25	25	5	2	113	3.04
1889	3	3	11	16	19	28	34	33	8	1	156	4.17
1890	5	5	5	14	16	24	35	39	11	3	157	4.16
1891	2	9	7	18	16	27	46	34	10	5	174	4.57
1892	7	6	10	16	24	35	37	36	9	3	183	4.77
1893	13	7	10	18	18	18	29	39	7		159	4.11
1894	10	6	14	12	20	24	22	30	6	1	145	3.71
1895	4	8	13	17	23	37	34	38	13	1	188	4.77
1896	6	10	9	18	17	32	39	43	15	2	191	4.80
1897	15	3	11	24	15	38	46	56	20	4	232	5.78
1898	5	7	16	16	15	35	51	65	16	3	229	5.66
1899	11	6	12	16	23	31	50	71	21	1	242	5.93
1900	12	5	15	14	34	35	49	61	20	3	248	6.02
1901	7	5	15	22	26	47	57	44	17	2	242	5.85
1902	8	4	19	20	33	43	64	77	25	4	297	7.15
1903	8	8	18	23	39	58	74	81	36	3	348	8.33
1904	6	4	19	25	34	57	67	76	45	6	339	8.08
1905	13	14	29	33	40	65	90	92	49	3	428	10.16
1906	7	9	19	29	47	67	108	93	36	5	420	10.16
1907	9	8	13	17	34	59	87	110	47	3	387	9.10
1908	10	7	17	25	27	61	74	113	36	4	374	8.76
1909	12	6	9	23	35	67	77	128	42	3	402	9.37
1910	9	6	15	30	37	69	116	96	50	1	429	9.96
1911	3	4	8	22	45	82	95	113	66	1	439	10.15
1912	6	11	20	20	50	79	102	124	49	3	464	10.68
1913	8	7	8	21	30	68	111	106	57	4	420	9.62
Total	227	194	383	569	779	1269	1720	1928	738	76	7883	

* Estimated population.

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TWENTY-THIRD REPORT

(TENTH BIENNIAL)

OF THE

STATE BOARD OF HEALTH

OF THE

STATE OF NEW HAMPSHIRE

FOR THE FISCAL PERIOD ENDING AUGUST 31, 1914

CONCORD, NEW HAMPSHIRE

1914

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STATE OF NEW HAMPSHIRE.

OFFICE OF THE STATE BOARD OF HEALTH.

STATE HOUSE, CONCORD, September 1, 1914.

To His Excellency the Governor and the Honorable Council:

I have the honor to submit herewith, in accordance with the laws of the State of New Hampshire, the twenty-third report of the State Board of Health for the two fiscal years ending August 31, 1914.

Respectfully submitted,

IRVING A. WATSON,

• Secretary.

REPORT.

The activities of the State Board of Health during the biennial period, 1913, 1914, are only partially represented in this report. A limit to its size prevents the inclusion of many matters of importance in connection with the educational, advisory and executive work of the board. It has been thought best, as a matter of instruction and record, to devote the major part of this publication to the work done in connection with the examination of public water supplies of the state, food and drug examinations, bacteriological investigations, etc., to the exclusion of other matters that might be of public interest. Included under this subject, in addition to analytical results, will be found a brief statement of the water-supply service, areas of watersheds, character of service pipe, average consumption, etc.

It has been the policy of the board to make examinations of public water supplies from time to time, for the purpose of detecting any changes that might occur, or any contamination that might take place through any possible channels.

In addition, many private supplies have been examined; also the sources of water supplies depended upon by the railroads of the state. A very complete account of all this work is exhibited in the report of the chemist.

FOOD AND DRUG EXAMINATION.

A considerable portion of the work done in the laboratory in the examination of foods and drugs has been published from time to time in the *Quarterly Bulletin* of the board, and is not here represented. There will be found, however, a report on Milk Examinations, exclusive of the many examinations that have been made of "inspected milk." (See page 274.) In connection with this subject, attention should be called to the additional requirements necessary to prosecute the work as it ought to be done and to meet public demands along these lines. This subject is forcefully presented in the report referred to.

BACTERIOLOGICAL EXAMINATIONS.

A tabulated statement of the work done in this department of the laboratory may be found elsewhere in this volume.

The statistics show that nearly 12,000 examinations were made during the biennial period, more than 8,000 of which were upon specimens submitted by the physicians of the state, for diagnostic purposes chiefly. These figures are exclusive of many water and milk examinations in connection with the chemical examinations of these products.

INSPECTION SERVICE.

The one inspector employed by the board has been constantly engaged for the past four years in field work, in the inspection of dairies, groceries, bakeries, meat markets, slaughter-houses, alleged local nuisances, etc. A detailed account of his work, which embraces all sections of the state, cannot be included in this report, for the reason already stated.

Special attention has been given to the condition of dairies, the sanitary condition of stables, the methods of handling milk, the facilities for sterilizing milk receptacles and utensils, etc. Dairies are scored in all essential particulars (see page 308) and a copy of the rating is sent to the producer, thus revealing to him most graphically the defects that should be remedied.

In making these inspections, a member of the local board of health accompanies the inspector, in order to familiarize himself with methods and requirements necessary to the production of a clean and wholesome milk. In like manner, groceries, bakeries, restaurants, etc., have been inspected and scored.

In instances of unsanitary conditions, and practices in violation of the law and the regulations, legal notices to remedy defects within a reasonable time limit have been served upon the parties responsible therefor. Marked results in the interests of public health have been secured through such inspection service. Not a few of the most unsanitary conditions have been corrected. A few prosecutions have been made; but the greatest good has been secured through personal instruction and recommendation. The great majority of producers and vendors of food supplies exhibit a gratifying willingness to adopt suggested improvements, and subsequent events have shown the improved conditions to be a good financial investment for the owner.

In addition to the line of work indicated above, the inspector has accomplished much in sanitary education by giving free public illustrated lectures on public health questions throughout the state. His service to the public has been of incalculable value. The need and the demand for field work of this kind has become so great that another inspector should be provided for. The field is too extensive to be covered by one inspector.

TUBERCULOSIS.

For the purpose of conducting an educational campaign for the restriction and prevention of tuberculosis, the Legislature of 1913 enacted the following:

CHAPTER XVII.

AN ACT to Aid in the Suppression of Tuberculosis.

Be it enacted by the Senate and House of Representatives in General Court convened:

SECTION 1. The State Board of Health is authorized and instructed to prepare, or cause to be prepared, such bulletin or bulletins on the cause, restriction and prevention of tuberculosis, embodying such facts, suggestions and regulations as in its judgment shall best instruct the public in methods of prevention and restriction, including the proper sanitary management of said disease.

SECT. 2. It shall be the duty of the board of education of every school district in the state to furnish each teacher of a public school a sufficient number of copies of each bulletin, whenever issued, as to enable the said teacher, whose duty it shall be to distribute one copy to each family represented in said school district.

SECT. 3. The board of education shall ascertain, approximately, the number of copies of said bulletin that may be required under the provisions of the foregoing section and shall report the same to the State Board of Health within thirty days after request is made for same by said State Board of Health.

SECT. 4. The State Board of Health shall, as soon as practicable after ascertaining the number of copies of said bulletin that will be required for the distribution herein provided for, cause to be printed and forwarded to each board of education a sufficient number of copies to meet the requirements of section 2 of this act, and such additional number of copies as in the judgment of the said board may be otherwise profitably distributed.

SECT. 5. This act shall take effect and be in force on and after May 1, 1913.

Approved March 6, 1913.

Under the provisions of this act, a communication was addressed to the board of education of every town and city in the state, and to the superintendent of every educational institution, asking how many copies of the *Bulletin* on the Restriction and Prevention of Tuberculosis would be required to make a distribution through the schools as required under this law.

Upon receipt of the information asked for, the board transmitted the required number of copies for distribution to every family represented in the schools—approximately 60,000 copies.

An edition of 70,000 copies of the *Bulletin* was printed to meet other demands, including the mailing of a copy to every family in which there was a case of tuberculosis reported to the board.

Copies were also sent to every physician in the state, to all local boards of health, to clergymen, and to many other individuals.

During the past biennial period 698 cases of tuberculosis were reported by physicians directly to the State Board of Health, under the law requiring confidential returns. This number does not include some cases that were shown to be positive by bacterial examination at the State Laboratory of Hygiene.

It is very evident that not a small number of physicians are ignoring the law which requires the reporting each case of tuberculosis, confidentially, to the State Board of Health. From some localities, no returns have been received; in others, it would appear that the law is being complied with to the letter. There appears to be a total indifference in some quarters of the state to the requirements of the law, the advantage to patients through the reporting of the disease, as well as the protection of the public.

THE REPORTING OF INDUSTRIAL DISEASES.

The Legislature of 1913 enacted a law requiring the reporting of certain occupational diseases and providing for its enforcement. A copy of this law, together with suitable blanks, and a letter calling attention to the requirements of the law, was transmitted to every physician in the state and also to every hospital.

Three cases, only, were reported, as follows:

Place.	Sex.	Age.	Birth.	Occupation.	Diagnosis and symptoms.
Claremont.	M.	30.	Russia.	Finishing shoes.	Nitrobenzene poisoning. Syncope, pallor, cyanosis of lips and fingers, odor of almond oil in perspiration.
Dover.	M.	30.	U. S. A.	Printer (Stereotyper).	Mild lead poisoning. Abdominal cramps almost daily.
Manchester.	M.	45.	Greece.	Painter.	Lead poisoning. Anaemic, blue line on gums, constipation, albuminuria.

INSPECTED MILK.

The law, rules and regulations providing for the production and distribution of "Inspected Milk" are elsewhere given in this report. (See page 303).

It will be seen that, without exception, the most sanitary conditions, both in the production and the distribution of the milk, are required. Seventeen dairies have met all the requirements and have been licensed to sell "inspected milk." Careful supervision is being maintained over these dairies by the State Board of Health. Samples of the milk are taken at frequent intervals for bacterial examination at the State Laboratory of Hygiene, for the purpose of making certain that there is no weak link in the chain of production. The results have been extremely satisfactory, both to the public and to the producers.

In some instances the dairymen have been to considerable expense in fitting up milk rooms, providing facilities for sterilizing bottles and other receptacles, and in making alterations. The testimony of the producers is that there is a public appreciation of clean milk, and that the demand in some localities has been so great as to require an increase in herds. The movement appears to be eminently successful.

LUNACY.

The State Board of Health constitutes a Board of Commissioners of Lunacy. A special report is published, to which reference may be had for details. All commitments, discharges and deaths of insane persons are reported to the board, and a record of every case is kept.

Applications for State Aid for indigent insane persons must be made to the board, and an investigation into the financial standing or resources of the patient is carefully made before such aid is granted.

The following table may be of interest in showing the number of insane persons at the State Hospital and the county institutions at the close of the fiscal year. The law now prohibits the commitment of any insane person to the county almshouses, the few now remaining there being due to the fact that the State Hospital is lacking in facilities to care for them.

STATE BOARD OF HEALTH.

The following shows the number of commitments, discharges, and deaths at the institutions named, during the year ending August 31, 1914, also the number of inmates remaining at these institutions at the latter date, as shown by the records of the board.

Asylums for the Insane.	Inmates September 1, 1914.	Committed during the year ending Aug. 31, 1914.	Discharged.	Deaths.
New Hampshire State Hospital.....	1,110	366	184	130
Rockingham County Asylum.....	6	1	3	3
Strafford County Asylum.....	10	11	1	....
Belknap County Asylum.....	4	1	2	....
Carroll County Asylum.....	2	....	....	1
Merrimack County Asylum.....	....	....	....	....
Hillsborough County Asylum.....	20	16	6	....
Cheshire County Asylum.....	17	....	2	....
Sullivan County Asylum.....	8	1	2	1
Grafton County Asylum.....	....	....	....	....
Coos County Asylum.....	1	1	....	....
Total for State.....	1,178	397	200	135

SANITARY CONFERENCE.

During the past year the State Board of Health called a conference of local boards of health to discuss matters relating to public health interests. The session lasted two days and was well attended. Numerous papers were presented and instructive discussions followed.

These conferences are of great value in securing uniformity of action among local boards of health in the management of communicable diseases, the abatement of nuisances, and in dealing with numerous other conditions that confront them from time to time.

VITAL STATISTICS.

The following table gives the number of Births, Marriages, Divorces and Deaths returned for the calendar years 1912 and 1913:

	1912.	Rate per 1,000 population.	1913.	Rate per 1,000 population.
Births	9,133	21.02	9,239	21.17
Marriages	4,104	9.44 (Couples)	4,292	9.83 (Couples)
Divorces	641	1 to 6.4 (Couples)	620	1 to 6.9 (Couples)
Deaths	7,147	16.45	7,475	17.13

A separate statistical report is published and is available to those who desire to study the more intricate features of such returns, and it may be had upon application to the Department of Vital Statistics, Concord.

DEATHS.

Misleading statements have been made in alleging that New Hampshire has the highest death rate of any state in the Union. This statement may be correct with reference to the crude, or actual, death rate; but it is entirely misleading from a sanitary or public health viewpoint.

The crude death rate of a state, while showing the actual mortality, does not afford a reasonable comparison with the mortality of another state unless the population areas are similarly constituted with respect to birth rate, sex, and age groups.

It is apparent to any one that in a population area having a large number of births and a large number of aged people, the mortality must be much larger than in areas with different age distribution. In commenting upon this point, the Federal Bureau of the Census says:

“In some cases the sanitary conditions might be precisely the same, and yet the difference in the crude death rates might lead to the conclusion that one area was much more healthful than the other.”

The only way to obtain an exact understanding on this point is to have a standard for comparison—that is, a standard population—and compute the mortality returns from other states and areas upon this standard. The United States government did this for the years 1911 and 1912, and the following table gives the standard, or specific, rates per each one thousand of the population for each of the New England states:

STANDARD OR SPECIFIC DEATH RATE PER 1,000 POPULATION.

	1911.	1912.
Maine	13.0	15.5
New Hampshire	14.2	13.6
Vermont	12.6	15.2
Massachusetts	15.0	14.7
Rhode Island	15.7	15.2
Connecticut	14.8	14.2

The only New England States with a specific rate lower than that of New Hampshire in 1911 were Maine and Vermont, while in 1912 New Hampshire had the lowest specific rate of the New England states.

The Census Bureau, in further commenting upon the wrong impression conveyed by the crude death rate, says:

“For states like Maine, New Hampshire and Vermont, in which are unusually large proportions of persons of more advanced age, the corrected rates are far more representative of the true sanitary conditions, as compared with those of other states, than the crude rates.”

The United States Census Report for 1910 shows that New Hampshire has a larger percentage of persons living above 45 years of age than any other New England state.

This brief statement is for the purpose of refuting the inferential allegation that New Hampshire is an unhealthful state.

WATER SUPPLIES OF TOWNS AND CITIES.

EXAMINATION OF WATER SUPPLIES.

BY CHARLES D. HOWARD, CHEMIST.

Dr. Irving A. Watson, Secretary, State Board of Health:

DEAR SIR—The following tabulated matter, with accompanying special reports, represent the work of the laboratory in the examination and control of water supplies for the biennial period ending August 31, 1914.

NUMBER OF EXAMINATIONS.

The summary shows a total of 2,197 samples examined, classified as follows: samples representing regular public supply systems of towns and cities, 710; supplies of semi-public character, inclusive of hotels, industrial establishments, special sources for use on railroad trains, etc., 216; supplies of purely private character, 1,271.

PRIVATE SOURCES.

Comparing the last figure with that recorded two years ago for private sources, viz., 1,221, it will be observed that, notwithstanding a policy in the direction of retrenchment, there has been no actual reduction in the number of private supply examinations. As, however, in connection with the use of the application form, greater discrimination has of late been exercised in the acceptance of samples, it follows that the public demand for such work is on the increase, rather than showing the decrease which was at one time anticipated. Unfortunately, some of this demand is based upon a misconception as to the danger in drinking water, and a certain number of the analyses made are wholly unnecessary. The problem of proper discrimination in such cases, however, is not an easy one.

A NEW LAW GOVERNING THE CONTROL OF PUBLIC WATER SUPPLIES.

A law enacted by the Legislature of 1913 contains the following provisions governing the installation of water supplies:

"No person, association or corporation proposing to supply water for domestic uses shall construct any new system or enlarge any existing system for supplying water to the citizens of any town or city, without first submitting detailed plans of the proposed construction to the State Board of Health and securing its approval thereof. And it shall be the duty of the said State Board of Health to examine the topography and the water-shed of the proposed supply, and shall also make chemical and bacteriological analyses of the waters of the proposed supply before approval is granted."

Prior to this the acceptance or consent of the State Board of Health was not a requisite in connection with the installation of a public water supply. Occasionally special inspection and advice on the part of the board have been asked. More often it has been the practice merely to forward a sample from the proposed source, and, unless the report thereon was distinctly unfavorable, the sanitary aspects of the matter were not apt to receive any very elaborate consideration by the promoters.

In the smaller communities, where the family wells and springs were still doing fair service in providing drinking water, the furnishing of fire protection was (and still is) a prime consideration in connection with the selection of a water supply; consequently the advice of the expert who was called in was apt to be sought more with regard to such items as "pressure," "head," and "number of available fire-streams."

Because of the comparatively uncontaminated condition of many of our surface waters this method of supply selection has thus far not resulted in the installation of any great number of distinctly poor systems as regards quality. And where supplies of objectionable character have been instituted in the past, this has been due not so often to mistaken judgment on the part of town "water committees" as to considerations of financial expediency on the part of private promoters—conditions under which nothing short of the mandatory power as conferred upon the board by the above act could serve to protect the water consumers.

In some cases supplies originally of good quality have subsequently been rendered inferior or unsafe through the growth of population, or the establishment of manufacturing operations, or because of the largely increased use of the source in question as a summer dwelling or pleasure resort. In New Hampshire espe-

cially, the rapidly increasing "summer cottage" habit, with the attendant features of boating, bathing and fishing, is yearly becoming a greater menace to the purity of our pond and lake waters. But through the promulgation of sanitary regulations and by other means, steps are constantly being taken to reduce the degree of pollution to the lowest possible minimum.

Thus in the case of the Concord supply, the city has of late made large progress toward purchase of the shores, and a majority of the former cottagers have gone elsewhere. This, and a number of other cities and towns of the state have already adopted the policy of combining municipal ownership of the land bordering the supply with a system of forestation, it being recognized that the conversion of the water-shed into woodland not only has a marked influence in conserving the quantity but is protective of the quality as well.

On the shores of Willand Pond, the source of a portion of the Dover supply, is situated a recreation park serving jointly the cities of Dover and Somersworth. Because of conditions at this pond the city some time ago established a filter plant; recently, as an additional measure of protection, stringent regulations governing sanitary conditions at the park in question have been issued, it having been deemed desirable, because of the nature of the local conditions, to go a step further than customary with such regulations and to apply the provisions of the familiar sidewalk-spitting law to a portion of the park.

Possibly the worst conditions in this connection are to be found at Canobie Lake, the source of Salem's water supply. Yet here, because of the rigid sanitary requirements and the comparatively elaborate precautions observed at the park, as well as for other reasons, the actual danger is probably at least no greater than in the cases of a number of other sources, the shores of which are frequented to a much less degree. In the case of Laconia, the supply of which is physically one of the finest in the state, so critical had conditions become, arising from the above causes, that recently, largely as a precautionary measure, a purification system was installed.

Nevertheless, with all the precautions that it is practicable to enforce relative to the protection of surface water supplies from contamination, it is seldom that one can be absolutely assured at all times and under all circumstances that the water

which he may drink from such a source is positively free from all disease-producing elements. Although it has long been customary to purify water subject to gross or visible pollution, yet not until recently has much attention been given in this country to the idea of applying such methods of treatment as shall safeguard the consumer against those accidental, occasional and and largely unrecognizable elements of contamination from which scarcely any surface water in inhabited sections is altogether immune. In the more populous countries of Europe it has become a uniform requirement that *all* surface water supplies shall be subjected to some form of purification.

Obviously, the most dangerous variety of pollution is that which involves the discharge into our rivers and lakes of the waste of human existence. A conspicuous instance of a sewage-polluted water supply was that of the Ammonoosuc River at Woodsville, this water, although bearing the sewer discharges of a number of towns above, having been until recently pumped up and delivered to the citizens of the village without any real purification whatever. It is gratifying to be able to state, however, that the condition has lately been remedied.

A number of other towns derive their supplies from sources that are subject to an appreciable degree of pollution, but these supplies are now all submitted to some form of purification. In every case, however, for purposes of fire protection there is a by-pass direct to the distribution mains. In fact, in places where the regular supply is not derived from a contaminated source it is a common arrangement to have an emergency intake in one that is thus polluted.

Doubtless most works superintendents exercise a conscientious avoidance of opening these lines except at times of great emergency. And yet, when there is much shortage of water, as has been conspicuously the case of recent seasons, the temptation to take chances in thus ekeing out the supply must at times be very great. As a protection to the public against such an occurrence a commendable arrangement would seem to be in having a seal placed by the State Board of Health upon these emergency valves, with liability to a penalty for the breaking of such seal without immediate notification of the board.*

*Some legislation along these lines would seem to be desirable. Because of the serious menace sometimes involved in these emergency intakes it would not be unreasonable to require the installation, permanently, of some one of the simple forms of disinfecting apparatus.

In addition to that from municipal sewage there is always a risk of contamination in the case of the average surface water from such agencies as summer cottages, lumber camps, amusement parks, house-boats, ordinary boating, bathing, fishing, picnic parties, ice-cutting, and from farm privies or cesspools, hogpens and barnyards situated on the water shed. In the case of certain supplies of small volume, extensive adjoining pasturage may readily cause trouble. A case in point is that of the town of Antrim, the supply of which was (for drinking purposes) placed entirely out of commission for a number of weeks as a result of cattle using one end of the small pond as a wallowing place during an unusually dry season. Finally, the practice of cropping too closely to the banks of small streams serving as water supplies introduces an element of contamination—not only through the application of manure but as a result of arsenical insecticides liable to be washed in at times.

OPERATIONS UNDER THE LAW OF 1913.

Under the provisions of this law, before any new supply, or any extension of an old supply can be installed, not only must full plans of such construction be submitted to the State Board of Health, but the latter is obliged to “examine the topography and the watershed of the proposed supply, and shall also make chemical and bacteriological analysis of the waters of the proposed supply” before granting its approval—construction in the absence of the latter being punishable by a heavy fine.

On account of the protracted drouth during 1913, quite a number of towns were compelled to look up additional sources of supply. Also in a few cases new systems have been constructed or have been under contemplation. All of these matters necessitated special investigations on the part of this department, the field inspections having thus far devolved upon the chemist of the board. While it is believed that this represents a valuable line of work and that the time involved has been well spent, yet necessarily such has been at the expense of much which might have been accomplished otherwise in the analysis of foods and drugs and other laboratory operations. In a number of instances sterilization plants, both temporary and permanent, have been installed and these have necessitated careful watching for a

time through the medium of special examinations—all of which has seriously disturbed the routine of the laboratory as hitherto existing.

Water systems which have made use of chlorination during the past two years, either permanently, or temporarily in connection with emergency intakes, are those of the towns of Berlin, Hampton, Exeter, Lancaster, Franklin, Somersworth, West Lebanon and Woodsville. At Exeter, the primary use of chlorine is not for the purpose of sterilization but to assist flocculation of sediment preliminary to filtration. The installations at Somersworth and Woodsville (both employing liquified chlorine) are for the continuous treatment of the main source of supply. Franklin and Berlin make use of bleaching powder in connection with auxiliary river sources. Hampton has recently completed a new system derived from the famous Marston spring, the latter providing an ample supply of excellent quality for Rye Beach and Little Boar's Head, as well as Hampton Beach.

The West Lebanon division of the Hartford Water Company's supply was augmented during the autumn of 1913 by a spring and by pumping from the Connecticut River in conjunction with mechanical filtration. At this date it has again been found necessary to resort to the river source. It is hoped, however, that by another year a more desirable auxiliary source—plans for which have already been approved—will be available.

The town of Pembroke has recently commenced construction upon a new system having its source in a pond in the town of Deerfield, some thirteen miles distant. Meriden has supplemented its somewhat inferior well supply by mountain brook water of excellent character. Greenville is arranging to install a system from Pratt Pond. The town of Henniker has recently absorbed the property of the Henniker Spring Water Company, the source of the latter—formerly woefully insufficient—having been materially augmented and extended. The village of Haverhill adopted plans during 1913 for the installation of a supply from springs, while the town of Troy, having determined to enjoy the benefits of a public water system, is searching for a suitable supply. Merrimack is to commence construction at once upon a system derived from wells, the water of which is to be filtered, following a process of deferrization. The towns of Wilton and Plymouth

have also been obliged to consider ways and means of securing an additional supply.

Other special inspections made at various times have been of the supplies of the towns of Somersworth, Derry, Salem, Hudson, Charlestown, Suncook, Dover, Belmont, Lisbon and Concord.

MERRYMEETING POND PROJECT.

Arising from the fact that some of the cities and towns in the southeastern part of the state either had insufficient water, or the supply was of inferior character, a group of persons conceived the idea of establishing a common district supply on a scale such as certain other states now furnish examples. Accordingly, the New Hampshire Water Supply Company was chartered by the legislature of 1913, such company being given the right (providing construction is commenced by May 7, 1915) to furnish water from Merrymeeting Pond, situated in the town of Alton, to the various cities and towns in the district referred to.

As the local conditions about this pond have been found very favorable, and the water has been determined to be of unusual excellence, the plan has been given the approval of this board. Undoubtedly, under proper and satisfactory conditions of service, such a supply would prove of great value to the communities involved. Inasmuch, however, as all of the latter already have local systems of their own, some of which have been established at considerable expense and which under this plan would have to be abandoned, the reluctance in consequence to award service contracts has thus far proved a bar to the success of the enterprise.

WATER AND ICE USED UPON RAILROAD TRAINS.

Under the terms of an order issued during 1913 by the United States Treasury Department, it is incumbent upon railroads and other common carriers to periodically satisfy such department as to the purity of the water and ice provided for passenger use. The certifications as to purity, to be issued by a state or municipal health authority, are based upon the following instructions from the federal department:

INSTRUCTIONS RELATIVE TO THE CERTIFICATION OF THE
WATER AND ICE FURNISHED TO PASSENGERS IN
INTERSTATE TRAFFIC.

Samples of water and artificial ice from each and every source of supply should be subjected to bacteriological and chemical examination *at least once in every six months* by the proper state or municipal health authority within whose jurisdiction the supply is obtained, or by other person or persons competent to make such examinations, and whose results will be accepted by the state or municipal health authority whose duty it is to issue certificates. *Each new crop of natural ice should be examined and certified before use.*

The common carrier desiring a certificate of the state or municipal health authority within whose jurisdiction the water or ice is obtained, should make application therefor.

After the necessary examinations shall have been made the certificate should be issued on the above form *in triplicate*, one copy to be delivered to the common carrier, one copy to be forwarded to the Surgeon General, United States Public Health Service, Washington, D. C., and one copy to be retained as a matter of record and for future reference.

Whenever there is an unusual prevalence of typhoid fever, dysentery, infantile diarrhea, or other water-born disease in a locality from which common carriers receive water and ice, an additional examination of the water and ice should be made and a supplemental certificate made by the proper certifying authority and forwarded as above.

Contrary to an idea held in some quarters, the federal department does not make the examinations above called for. Neither is it in any wise compulsory upon a state or municipal department to furnish to the common carrier the inspection provided for under the terms of this order. While the variety of inspection involved is a highly desirable one, there is no reason why, for the sake of mere technical compliance with certain details of the federal order, such a department should burden itself with examinations in cases where it may be in a position to know that these are unnecessary and uncalled for.

In the future, requests for examinations of water and ice supplies as used in passenger service should be taken up with the local health departments, where such water and ice supplies are of public character and regularly subject to inspection at this laboratory. Upon receipt of the certificate of analysis, the local health official will render the desired certification, based upon such analytical report. Where special sources are involved the matter may be taken up directly with this department, although collections should be made by the local health official. In so far

as practicable, local or topographical inspections will be made of such sources by a representative of the laboratory.

LIST OF RAILROAD WATER AND ICE SOURCES.

Following is a list of sources of water and ice supply used for passenger consumption on interstate trains, as based upon information supplied by the railroads to date. Apparently a number of the smaller stations are missing from this list. With but two or three exceptions, practically all New Hampshire train routes are of interstate character, and in the case of the exceptions the quality of the water is known and is subject to inspection. The Grand Trunk Railway takes no supplies of this nature from New Hampshire sources. Much of that supplied certain other interstate trains is also from out of state sources.

For results of examinations of the supplies here represented, the tabular matter under towns and cities should be consulted.

Station.	Source of Water Supply.	Source of Ice Supply.
†Bartlett	Precinct supply	Sebago Lake, Me.
*Bristol	Bristol Aqueduct Co.	None
*Cherry Mountain	Stream	Davis Pond, Jefferson
*Claremont	Town supply and spring at Jct.	Jones Pond, Claremont Jct.
†Colebrook	Colebrook Water Co.	None
*Concord	City supply	Penacook Lake Ice Co. & Concord Ice Co.
†Coös Junction	Lancaster precinct supply	None
†Crawfords	Stream	None
*Dover	City supply	Cocheco River
†Fabyans	Spring	Saco Lake
†Glen	Glen Water Co.	None
*Hillsborough	Town supply	None
†Intervale	North Conway precinct	None
*Jefferson	Mountain spring	None
*Keene	City supply	Keene Ice Company
*Lancaster	Precinct supply	Smith & Howard
†Lancaster	Precinct supply	Sebago Lake, Me.
*Manchester	City supply	Manchester Coal & Ice Co. (Massabesic Lake and Nutt Pond) ; Maxwell Ice Co. Black Brook).
*Nashua	Pennichuck Water Co.	G. E. Balcom, Sandy Pond and Tarnic Pond

†North Conway	Precinct supply	None
*North Conway	Precinct supply	G. W. Russell
†North Stratford	Hutchins system	None
*Peterborough	Town supply	None
*Plymouth	Town supply	J. R. Elliott
*Portsmouth	City supply	None
†Quebec Junction	Spring	None
*Rochester	City supply	None
†Sawyer's River	Spring	None
†West Stewartstown	Consolidated Water Co. (springs)	None
†Whitefield	Precinct supply	None
*Wilton	Town supply	None
*Wolfeboro	Town supply	None
*Woodstock (North)	Precinct supply	L. F. Parker

*Supplying Boston & Maine; †supplying Maine Central; ‡joint supply.

All of the above sources of water supply represent water of satisfactory quality, organically, such being in many cases of more than average excellence. In one case, however, that of the Quebec Junction supply, certification was refused because of an excessive proportion of dissolved lead. This source has accordingly been abandoned for public use.

ICE.

During the period represented by this report twenty-nine samples of ice have been examined, seven of which have been reported adversely because of unclean or unattractive character, such being deemed on this account unfit for direct introduction in food or drink, although showing no positive evidence of sewage contamination.

As a rule, there is very little danger of infection from ice as a result of any characteristic inherent in the latter—contrary to the popular idea in this connection. This is due (1) to the well known fact that in the freezing of natural ice under the condition of any considerable depth of water, a process of purification, or separation of the constituents originally present in the water, takes place, the impurities tending to be thrown out of the freezing mass; (2) after ice has been subjected to storage for a few weeks, practically all bacteria of objectionable character perish. Nevertheless, while it is, in consequence of these facts, possible

to utilize ice from sources, the water of which would not itself be suitable, yet where there is any serious degree of pollution, the direct introduction of such ice into food or drink should not be condoned.

Not infrequently, ice is cut from very shallow ponds, with the result that there is little or no opportunity for purification during freezing, and such ice may in consequence be charged with vegetable and other organic matter. Again, as a result of a rain followed by freezing just preceding harvesting, the product may contain a dirty, more or less discolored streak. Ice harvested from sources in the vicinity of railroads will generally show numerous black specks representing cinders—this being not infrequently the case even when the road-bed is situated at some distance away. Where the railroad skirts the source very closely, so that the latter receives wash from the right-of-way direct, there is liability of serious contamination due to fecal matter discharged from train closets.

By far the best grades of ice are those from which the surface, with its accompanying dirt, etc., has been removed by planing during the process of harvesting. Unfortunately the latter is practiced to but a very limited extent in New Hampshire. It is believed that as a general proposition any elaborate scheme of analysis applied to ice represents a waste of time. The local inspection is important. After that, the chief desideratum is that the ice shall be clear and colorless, melting to a clean liquid. Not only can the householder apply this test for himself, but he should decline to patronize any concern which delivers dirty or cloudy ice. Those companies doing any considerable amount of business will plane their supplies if their patrons will but demand it. In any case, there is no excuse for tolerating dirty ice.

In two or three instances the samples submitted for train use were reported unfavorably because of the defect alluded to. In this connection, however, a fact that needs emphasizing is that cleanliness in the person of the one who fills the water cooler is a much more important object of concern than is the purity of the original source. There is no logic in having frequent examinations of ice where the latter is introduced into the water under the practice prevailing, there being vastly more chance of contracting disease from contact of such ice with the train man's filthy hands than from any inherent impurity. On this account it

is believed that the present practice on trains and other public places of icing by direct addition to the water should be forbidden. Any one who is inclined to be skeptical on this point need only make a few observations for himself.

Following is a summary of the results of ice examination. The individual results are given under the towns elsewhere:

SUMMARY OF ICE EXAMINATIONS.

Town or City.	No. of Samples.	Passable.
Carroll	4	2
Concord	3	2
Conway	1	1
Claremont	3	0
Dover	1	1
Jefferson	1	1
Lancaster	2	2
Littleton	2	1
Manchester	7	7
Nashua	3	3
North Woodstock	1	1
Woodsville	1	1
Total	29	22

SEWAGE DISPOSAL.

During the 1913 legislative session, the following law was enacted:

In order to maintain the purity of streams, lakes and rivers and to prevent further contamination, no person, association or corporation shall hereafter cause or permit the discharge of sewage or other deleterious waste from any factory, hotel, boarding house, or other commercial establishment into any stream, lake, pond, or river not hitherto polluted without first submitting detailed plans of said proposed discharge to the State Board of Health and securing the approval of the said board.

Whoever violates any of the provisions of this act shall be punished by a fine of not less than one hundred dollars nor more than one thousand dollars.

The matter of sewage disposal is very closely allied to the subject of water supply protection. It is high time that something was done to restrict the promiscuous discharge of human and manufacturing wastes into our public waters. Nevertheless, while the above enactment is a movement in the right direction and

sounds well, such law is practically of no utility whatever because of the nullifying phrase, "not hitherto polluted."

While unquestionably a wise restriction should be exercised over the matter of sewage disposal, and to this end a law which would really empower the State Board of Health to regulate such disposal is greatly to be desired, still it must not be supposed that there is no danger of going too far in this direction. Although the present day movement, in evidence in all progressive states, to exclude or regulate the entrance of sewage into the public water courses is in every wise commendable, yet there are those who, lacking a conception of the difficulties involved and ignorant of the scientific aspects of the matter, would have the town or city go an unwarrantable distance in this direction.

The present views of sanitary engineers on this subject are well set forth in the following extract from the recent report of a committee of the National Association for Preventing the Pollution of Rivers and Waterways:

Because of the increasing population of the country, the increasing tendency toward concentration of population in cities, the extension of agriculture, the increasing necessity of artificial fertilization, and the growth of manufacturing, it is and always will be physically impossible to maintain our rivers and waterways in their original and natural condition of purity. However much we may strive to the contrary, some pollution of the water is inevitable. A reasonable degree of cleanliness should nevertheless be demanded.

Up to certain limiting points the use of our rivers and waterways as vehicles for the reception, transmission, and ultimate disposal of sewage and other liquid wastes is primarily an economic question. The discharge of raw sewage into our streams and harbors should not be universally prohibited by law.

The method of disposal of sewage by dilution is recognized as sound in principle and safe in practice, if carried on with proper restrictions. The power of streams to transport suspended matter and the ability of natural bodies of water to oxidize and destroy offensive substances through the action of various physical, chemical, and biological processes represent a natural resource that should be utilized as far as this can be done with safety and economy and without offense.

Even when the demands of public health, offense to decency, and interference with navigation are such as to place a limit to the pollution of the stream, the economic aspects of the case should be considered in regulating the amount of permissible discharge of waste matter—the fundamental principle being that the results accomplished shall be reasonably commensurate with the cost of prevention of the pollution."

Sewage may be of two kinds, industrial and domestic, although for our purpose a special classification might be made to include farm and pasture drainage.

In New Hampshire the first named variety of pollution, although of course occurring to a considerable extent in all of the main water-ways, is not as yet a very serious factor in connection with water supply. A conspicuous example is to be found in the discharge of so-called "leather-board" waste, consisting in this case of a mixture of vegetable fibres and oxide of iron, into the Salmon Falls River—a circumstance which has proved a source of considerable annoyance to the Somersworth Water Works department.* Recently, this nuisance has been largely abated through the construction by the manufacturers of large settling basins, which serve to retain much of this waste.

At Derry one of the shoe shops is at the present time discharging large quantities of leather-board into a small brook which, flowing through the heart of the village and subsequently receiving sewage of other character, eventually reaches within a very short distance of the public supply wells. At times of overflow of this brook these sewage matters are prevented from actual flowage in the wells only by the height of the curbs. That such a shiftless and totally unnecessary method of waste disposal should be permanently tolerated seems almost inconceivable.

Other forms of industrial waste include sawdust, spent liquors from bleaching and dyeing establishments, soap-impregnated wash water from laundries, refuse from creameries and slaughter houses, and the resinous and acid liquors from sulphite pulp mills.

METHODS OF SEWAGE DISPOSAL.

At the present time, with two exceptions, our towns and cities have not scrupled to dump their sewage into the public water courses without any purification whatever. Yet, with but little expense, much could be done in the way of improvement. Septic tanks are not an expensive proposition. Even settling basins afford means for material clarification, the resulting effluent, while of course objectionable, being considerably less so than is the original unsettled sewage.

By means of the septic tank a still better effluent is secured, although one, nevertheless, which is putrescible, and so far as its

*See special report on Somersworth supply elsewhere.

bacterial content is concerned, as highly dangerous as ever to discharge into sources used for water or ice supply. For satisfactory results, a secondary process involving oxidation of the nitrogenous matter is indispensable, and where final discharge into a source of water supply is unavoidable, the effluent from the latter must be subjected to chlorination.

At this date, two towns, Farmington and Wolfeboro, are utilizing the septic process. A large number of septic tanks have, however, recently been installed in connection with hotels, institutions, and private residences. Most of the latter depend for their efficiency practically altogether upon the anaerobic process. The sewage disposal system at the New Hampshire School for Feeble Minded at Laconia, however, includes a system of sand filtration, which, according to recent analyses, would seem to be capable of excellent work. The surprisingly good results recently noted in connection with some of the smaller tank installations have thus far not been duplicated upon the larger scale. In the latter cases such effluents inevitably carry very large proportions of nitrogenous matter which can only be rendered non-putrescible through oxidation. For such secondary treatment various methods are now in successful use elsewhere.

Following is a general summary of the results of water examinations for the period September 1, 1912—August 31, 1914. Analytical data afforded by supplies of public and semi-public character is tabulated under the individual towns and cities.

Summary of Examinations, 1912-1914, by Towns.

Town.	Total Public Exam- inations.	Total Semi - Public Examinations.	Ex- aminations.	Private Supply Data.				Total Lead Tests.	Total Show- ing Excessive Lead (0.050+ Parts)	
				Pure.	Pure but for Excessive Lead.	Doubtful or Inferior.	Polluted.		Private Sup- plies.	Public and Semi-public Supplies.
Acworth	0	0	1	1	0	0	0	1	0	0
Alexandria	0	0	2	0	1	1	0	2	1	0
Allentown	0	0	1	0	0	1	0	0	0	0
Alstead	0	1	10	4	3	4	0	7	4	0
Alton	2	2	5	1	1	3	1	1	1	0
Amherst	0	1	10	4	0	5	1	4	0	0
Andover	2	0	19	9	1	4	2	11	6	0
Antrim	4	0	4	2	0	1	1	7	2	0
Ashland	2	2	5	3	1	3	1	5	1	0
Atkinson	0	0	1	1	0	0	0	0	0	0
Auburn	0	5	2	0	0	0	2	5	0	0
Barnstead	0	0	4	0	0	2	2	3	2	0
Barrington	0	0	2	0	0	0	2	0	0	0
Bartlett	3	0	1	0	0	1	0	0	0	0
Bath	2	0	0	0	0	0	0	0	0	0
Bedford	0	0	6	1	0	2	3	4	1	0
Belmont	2	0	3	2	0	1	0	0	0	0
Bennington	4	1	2	0	1	1	0	0	0	0
Berlin	48	4	5	2	0	1	2	0	0	0
Bethlehem	3	0	0	0	0	0	0	0	0	0
Boscawen	2	0	2	0	1	0	1	1	1	0
Bow	0	0	6	1	0	3	2	1	0	0
Bradford	0	0	16	7	1	4	3	9	2	0
Bridgewater	0	0	2	1	0	1	0	0	0	0
Bristol	4	0	24	3	5	7	7	15	9	0
Brookline	2	1	1	0	0	1	0	1	0	0
Canaan	2	2	16	3	1	5	7	5	3	1
Campton	0	2	2	0	0	0	0	3	0	1
Candia	2	0	4	7	0	2	1	0	0	0
Canterbury	0	3	5	1	0	2	2	1	0	0
Carroll	0	4	1	1	0	0	0	1	0	1

Summary of Examinations, 1912-1914, by Towns.—Continued.

Town.	Total Public Exam- inations.	Total Semi - Public Examinations.	Total Private Ex- aminations.	Private Supply Data.				Total Lead Tests.	Total Show- ing Excessive Lead (0.050+ Parts.)	
				Pure.	Pure but for Excessive Lead.	Doubtful or Inferior.	Polluted.		Private Sup- plies.	Public and Semi-public Supplies.
Center Harbor.....	2	9	4	1	0	2	1	1	0	0
Charlestown	9	0	4	1	2	0	0	4	3	0
Chatham	0	0	1	0	0	0	0	1	1	0
Chester	0	2	3	0	0	2	1	2	1	0
Claremont	6	4	11	2	2	6	1	7	2	0
Chichester	0	1	11	2	0	3	5	5	0	0
Colebrook	2	0	1	0	0	1	0	0	0	0
Concord	23	15	38	13	1	12	7	20	6	3
Conway	4	3	11	3	2	4	1	4	2	0
Cornish	0	0	4	1	0	3	0	0	0	0
Croydon	0	0	7	3	0	3	1	1	0	0
Danbury	0	0	14	1	4	3	2	9	8	0
Danville	0	0	1	0	0	0	1	0	0	0
Derry	8	0	4	0	1	1	2	1	1	0
Deerfield	0	0	6	1	0	3	2	3	1	0
Dover	32	0	16	2	0	10	4	1	0	0
Dublin	0	0	10	4	1	2	3	2	1	0
Durham	20	0	9	1	0	3	5	1	0	0
Dunbarton	0	0	7	3	0	2	1	2	0	0
Eaton	0	0	1	1	0	0	0	1	0	0
Elkins	0	0	1	0	0	0	0	1	1	0
Enfield	0	3	4	2	0	1	1	1	0	0
Epping	0	1	3	0	0	0	3	1	0	0
Epsom	0	0	10	0	0	6	4	3	0	0
Exeter	2	1	9	1	0	4	4	1	0	0
Farmington	7	5	12	0	0	7	5	4	0	0
Francestown	2	0	6	2	0	2	1	3	2	0
Fitzwilliam	0	2	27	5	0	9	13	13	1	1
Franklin	28	4	30	11	8	7	5	18	10	0
Franconia	2	0	1	0	0	0	1	2	2	0

STATE BOARD OF HEALTH.

Summary of Examinations, 1912-1914, by Towns.—Continued.

Town.	Total Public Examinations.	Total Semi - Public Examinations.	Total Private Examinations.	Private Supply Data.				Total Lead Tests.	Total Showing Excessive Lead (0.050+ Parts.)	
				Pure.	Pure but for Excessive Lead.	Doubtful or Inferior.	Polluted.		Private Supplies.	Public and Semi-public Supplies.
Freedom	0	2	1	1	0	0	0	2	1	0
Fremont	0	1	0	0	0	0	0	1	0	0
Gilmanton	0	0	2	2	0	0	0	1	0	0
Gilsum	0	0	5	2	0	2	1	5	2	0
Goffstown	3	0	11	1	2	5	3	5	2	0
Gorham	2	0	2	0	0	1	1	1	0	0
Goshen	0	0	5	0	2	2	1	4	4	0
Grafton	0	0	8	2	3	0	0	8	5	0
Grantham	0	0	1	1	0	0	0	0	0	0
Greenfield	0	0	10	1	1	4	4	6	4	0
Greenland	0	0	6	2	0	3	1	1	0	0
Greenville	14	1	11	2	2	6	1	7	3	0
Groton	0	0	0	0	0	0	0	0	0	0
Hampstead	0	0	2	0	0	0	2	0	0	0
Hampton	29	0	21	2	0	6	13	2	0	0
Hampton Falls.....	0	0	0	0	0	0	0	0	0	0
Hancock	2	0	2	1	0	1	0	2	0	0
Harrisville	0	0	3	1	0	0	1	3	2	0
Hanover	3	0	2	1	1	0	0	2	1	0
Hart's Location.....	0	1	0	0	0	0	0	0	0	0
Haverhill	16	3	22	3	3	7	1	19	11	3
Hebron	0	0	6	4	2	0	0	3	2	0
Henniker	10	0	5	1	0	0	4	1	1	0
Hill	2	0	4	1	1	1	0	2	2	0
Hillsborough	3	0	12	2	2	4	3	8	5	0
Hinsdale	0	0	7	3	0	3	0	5	1	1
Holderness	0	0	3	0	1	0	1	3	2	0
Hollis	0	0	1	0	1	0	0	0	0	0
Hooksett	0	2	8	2	2	3	1	4	3	0
Hopkinton	2	3	6	1	0	3	0	3	2	0

WATER SUPPLIES OF TOWNS AND CITIES. 21

Summary of Examinations, 1912-1914, by Towns.—Continued.

Town.	Total Public Exam- inations.	Total Semi - Public Examinations.	Total Private Ex- aminations.	Private Supply Data.				Total Lead Tests.	Total Showing Excessive Lead (0.050+ Parts.)	
				Pure.	Pure but for Excessive Lead.	Doubtful or Inferior.	Polluted.		Private Sup- plies.	Public and Semi-public Supplies.
Hudson	13	2	6	0	0	4	2	0	0	0
Jackson	0	3	2	0	0	2	0	0	0	0
Jaffrey	2	1	7	3	0	1	3	2	1	0
Jefferson	0	5	0	0	0	0	0	1	0	0
Keene	12	1	8	5	1	2	2	1	1	0
Kingston	0	0	1	0	0	0	1	1	0	0
Laconia	51	2	23	5	0	5	12	5	1	0
Lancaster	4	0	0	0	0	0	0	0	0	0
Lebanon	37	0	9	4	2	2	0	8	3	0
Lempster	0	0	5	0	2	1	1	5	3	0
Lincoln	2	1	0	0	0	0	0	0	0	0
Lisbon	4	4	4	2	0	2	0	1	0	0
Litchfield	0	0	1	0	1	0	0	1	1	1
Littleton	3	0	4	2	0	2	0	5	1	0
Londonderry	0	3	2	1	0	1	0	2	0	0
Loudon	0	0	5	0	0	4	1	2	0	0
Lyme	2	0	0	0	0	0	0	2	0	0
Lyndeborough	0	0	3	1	1	0	0	3	2	0
Madbury	0	0	0	0	0	0	0	0	0	0
Manchester	26	3	27	3	1	11	9	9	2	1
Marlboro	0	6	18	6	4	5	2	16	5	2
Marlow	0	0	4	1	1	0	2	3	1	0
Mason	0	0	3	1	0	0	2	1	0	0
Meredith	2	5	6	3	0	2	1	2	0	2
Merrimack	5	0	4	2	0	1	1	2	0	0
Milan	0	0	18	1	8	3	0	15	14	0
Milford	8	1	9	0	1	5	2	7	5	0
Milton	0	3	1	0	0	1	0	2	1	1
Monroe	0	0	3	2	0	0	1	3	0	0
Mont Vernon.....	0	0	2	0	0	0	2	1	0	0

Summary of Examinations, 1912-1914, by Towns.—Continued.

Town.	Total Public Exam- inations.	Total Semi - Public Examinations.	Total Private Ex- aminations.	Private Supply Data.				Total Lead Tests.	Total Show- ing Excessive Lead (0.050+ Parts.)	
				Pure.	Pure but for Excessive Lead.	Doubtful or Inferior.	Polluted.		Private Sup- plies.	Public and Semi-public Supplies.
Moultonborough	0	4	1	1	0	0	0	1	0	1
Nashua	3	0	5	2	0	0	3	2	1	0
New Boston.....	6	0	9	0	2	2	5	11	2	1
Newbury	0	0	8	7	1	0	0	5	1	0
Newcastle	0	0	2	0	0	0	2	0	0	0
New Durham.....	0	1	5	2	0	1	1	3	1	0
New Hampton.....	2	0	3	1	1	0	0	3	1	0
New Ipswich.....	0	0	8	1	3	2	1	8	5	0
New London.....	1	2	10	2	0	7	1	2	1	0
Newington	0	0	4	0	2	2	0	0	0	0
Newmarket	5	0	3	0	0	0	3	1	0	0
Newport	3	0	12	4	1	5	2	8	2	0
Newton	0	1	7	2	0	1	4	1	0	0
North Hampton.....	0	3	1	1	0	0	0	0	0	0
Northumberland	2	0	3	0	0	0	0	2	2	0
Northwood	0	1	0	0	0	0	0	1	0	1
Nottingham	0	0	2	0	0	0	2	0	0	0
Ossipee	2	6	9	3	1	3	1	3	2	0
Pelham	0	0	0	0	0	0	0	0	0	0
Pembroke	7	1	15	3	1	4	7	2	2	0
Peterborough	5	4	32	13	1	9	3	13	4	1
Pittsfield	2	0	2	1	0	0	1	0	0	0
Plainfield	4	0	6	2	0	3	2	1	0	0
Plaistow	0	0	1	1	0	0	0	0	0	0
Plymouth	6	1	13	4	2	6	1	7	2	0
Portsmouth	3	3	9	3	1	0	5	2	1	0
Quincy	0	0	3	0	1	0	1	2	1	0
Raymond	3	0	0	0	0	0	0	0	0	0
Rindge	0	0	3	0	2	0	1	2	2	0
Rochester	2	3	19	3	0	6	9	7	3	1
Rollinsford	0	10	0	0	0	0	0	1	0	0

Summary of Examinations, 1912-1914, by Towns.—Continued.

Town.	Total Private Exam- inations.	Total Semi - Public Examinations.	Ex- Private aminations.	Private Supply Data.				Total Lead Tests.	Total Show- ing Excessive Lead (0.050+ Parts.)	
				Pure.	Pure but for Excessive Lead.	Doubtful or Inferior.	Polluted.		Private Sup- plies.	Public and Semi-public Supplies.
Rumney	0	1	11	5	4	1	0	10	5	0
Rye	0	1	10	1	0	1	7	0	0	0
Salem	2	0	2	1	1	0	0	1	0	0
Salisbury	0	5	6	0	0	3	3	3	1	0
Sanbornton	0	0	2	0	0	1	1	1	1	0
Sandwich	0	3	12	2	0	5	5	3	0	0
Seabrook	0	0	4	2	2	0	0	0	0	0
Somersworth	128	1	15	4	4	7	0	0	0	0
Springfield	0	1	3	2	0	1	0	2	0	0
Stewartstown	1	0	0	0	0	0	0	0	0	0
Stratford	2	0	0	0	0	0	0	0	0	0
Stoddard	0	0	1	1	0	0	0	1	0	0
Strafford	0	1	4	0	0	0	4	2	0	0
Stratham	0	1	2	0	0	2	0	0	0	0
Sunapee	3	1	12	2	1	1	1	2	1	0
Sullivan	0	0	0	0	0	0	0	0	0	0
Sutton	0	3	18	9	2	3	4	9	2	0
Swanzy	0	3	7	3	0	1	3	4	1	0
Tamworth	0	7	5	1	0	3	1	0	0	0
Temple	0	0	1	0	1	0	0	1	0	0
Thornton	0	0	1	0	0	1	0	1	0	0
Tilton	3	0	13	2	1	3	7	4	2	0
Troy	5	4	21	0	1	11	9	18	13	0
Tuftonborough	0	0	3	0	0	1	2	0	0	0
Unity	0	0	1	0	0	0	1	0	0	0
Wakefield	1	3	17	3	1	3	10	7	3	0
Walpole	5	0	7	0	0	3	4	7	1	0
Warner	4	0	22	9	2	5	5	13	5	0
Warren	0	1	10	3	0	3	0	5	5	0
Washington	0	0	6	3	1	2	0	6	2	0
Weare	0	1	6	0	0	4	2	5	2	0

Summary of Examinations, 1912-1914, by Towns.—Concluded.

Town.	Total Public Exam-inations.	Total Semi - Public Examinations.	Total Private Ex-aminations.	Private Supply Data.				Total Lead Tests.	Total, Show-ingExcessive Lead (0.050+ Parts.)	
				Pure.	Pure but for Excessive Lead.	Doubtful or Inferior.	Polluted.		Private Sup-plies.	Public and Supplies. Semi-public
Webster	0	2	1	0	0	0	1	1	0	0
Wentworth	0	1	16	4	4	3	2	10	7	0
Whitefield	2	0	2	0	0	0	2	0	0	0
Wilmot	0	0	7	4	1	1	1	5	1	0
Wilton	9	1	24	7	4	8	5	18	7	1
Winchester	0	1	9	0	1	3	5	7	1	0
Windham	0	5	3	1	0	2	0	0	0	0
Wolfeboro	2	2	5	1	0	2	2	1	0	0
Woodstock	3	1	6	5	0	0	0	1	1	0
Totals	716	216	1,271	313	402	343	618	632	263	23

Total samples examined, 2,203.

Alstead.

Examination of Water from Spring of C. N. Vilas.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11031	1913 Mar. 31	None	None	Earthy	0.00	.0006	.0016	.005	Ft. tr.	.05	.4	V. h'h	....	0	....

Alton.—The Alton & Alton Bay Water Works Company, established in 1892-93, supplies about one hundred families (90 per cent of the population), with water from a spring, except in dry weather, when it is pumped from Lake Winnipесауkee to a reservoir of 150,000 gallons' capacity.

Examination of Water from Faucet of Supply of Alton & Alton Bay Water Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10871	1913 Apr. 7	None	V. slight	None	0.25	.0006	.0060	.0050	.0000	.15	1.9	.....	.....	0	....
12002	1914 Apr. 14	None	V. slight	Sl. Earth	0.15	.0008	.0054	.0050	.0000	.16	1.8	.....	.....	0	....

Examination of Water from Supply of Clement Inn.

11427	1913 Aug. 13	None	None	None	0.05	.0006	.0010	.0050	.0000	.03	1.2	0
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Examination of Water from Wayside Well.

11330	1913 July 29	Heavy opal	Consid. fine	Sl. Earth	0.15	.0040	.0060	.1750 Ft. tr.		.12	1.9	0
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Amherst.

Examination of Water from Well of School District No. 2.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11819	1913 Dec. 9	Consid. opal	Consid. earth	Earthy. Arom.	0.05	.0010	.0028	.0500	Tr.	.15	1.4	.....	.....	0	....

Andover.—The Village Fire District system, supplying 90 per cent of the population, is from a pond fed by a brook and augmented in area through the erection of a dam.

STATE BOARD OF HEALTH.

Examination of Water from Village Fire District System.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10870	1913 Apr. 8	V. slight	V. slight fine	None	0.10	.0026	.0020	.0050	.0000	.11	0.9	....	....	0	0
11936	1914 Apr. 8	V. slight	Sl. veg.	V. sl. marsh	0.15	.0020	.0072	.0050	.0000	.10	1.2	....	....	0	0

Examination of Water from Well Supplying Hotel Potter.

11858	1914 Jan. 1	None	Slight	None	0.05	.0006	.0010	.0050	.0000	.10	1.5	.045	0
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Antrim.—A gravity system installed by the town in 1893 from a pond of about sixteen acres in area. Mains of wood pipe, with iron service pipe. Supplies ninety per cent of the population.

Examination of Water from Tap of Town Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10868	1913 Apr. 7	Slight	V. sl. fine	None	0.15	.0020	.0080	.0050	.0000	.11	0.3	....	....	0	....
11739	Nov. 3	None	None	None	0.07	.0005	.0094	.0030	.0000	.13	0.4	....	....	0	....
11887	1914 Feb. 2	Sl. opal	Consid. blk floe.	Mark. veg.	0.25	.0280	.0170	.0100	Sl. tr.	.11	0.1	....	....	0	0
11985	Apr. 8	None	Sl. fine	Sl. arom.	0.08	.0100	.0096	.0050	.0000	.12	0.6	....	....	0	0

Ashland.—The public system, owned by the town, is derived from a pond.

Examination of Water from Tap of Town Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10366	1913 Apr. 8	Slight	Sl. flocc.	V. sl. earth	0.20	.0016	.0050	.0025	.0000	.14	0.3	.....	.....	0	.....
11989	1914 Apr. 9	V. slight	Sl. flocc.	Earthy	0.17	.0006	.0061	.0025	.0000	.08	0.3	.....	.....	0	0

Examination of Water from Well of Batchelder & Webber.

12081	1914 May 6	None	None	None	0.0	.0006	.0010	.0020	.0000	.03	1.9	.040	0
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Examination of Water from Spring owned by State.

12083	1914 May 6	None	V. slight	Sl. earth	0.2	.0006	.0048	.0070	.0000	.17	0.4	0
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Auburn.—The analyses representing the supplies of "Island View Farm" and "The Winthrop" indicate a sewage polluted condition.

Examination of Water from Well of T. S. Emery Supplying "The Elms."

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11289	1913 July 23	Sl. opal	V. slight	V. slight	0.05	.0020	.0024	.0300	.0000	.55	1.9	.....	.....	0	.....

Examination of Water from Well of L. Hall Supplying "Pine Bluff."

11290	1913 July 23	None	V. slight	None	0.05	.0006	.0010	.0050	.0000	.10	1.7	0
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Examination of Water from Well of E. P. Tilton Supplying "Island View Farm."

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11291	1913 July 23	None	Sl. floe.	Sl. foul	0.05	.0010	.0010	.3000	.0000	3.45	8.9	....	....	0	....

Examination of Water from Well of G. E. Gilman Supplying "The Winthrop."

11292	1913 July 23	Heavy opal	Consid. fermg.	V. slight foul	0.25	.0010	.0150	.100	V. high	1.10	1.9	Consid.	0
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Examination of Water from Well of Harriett Davis Supplying "Essex Farm."

11293	1913 July 23	Ft. opal	Sl. floe. fermg.	V. slight	0.07	.0020	.0020	.0050	.0000	.25	3.5	Consid.	+
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Bartlett.—The Village Precinct supply is taken from a stream having a watershed of two square miles, wooded and uninhabited. The Glen Water Company supplies 18 families at Glen from springs (gravity system).

Examination of Water from Tap of Village Precinct System.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11997	1914 Apr. 13	V. slight	None	None	0.07	.0006	.0018	.0050	.0000	.08	0.3	....	....	0	20

Examination of Water from Tap of Glen Water Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11421	1913 Aug. 12	None	Mod. flocc.	None	0.05	.0006	.0024	.0050	.0000	.05	0.4	.....	.....	0	
12179	1914 June 1	None	Sl. fermg.	None	0.05	.0006	.0024	.0030	.0000	.05	0.1	.....	Sl.	0	0

Bath.—The gravity system of the Bath Aqueduct Company has its source in springs.

Examination of Water from Tap of Bath Aqueduct Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10884	1913 Apr. 9	None	Sl. fine	None	0.05	.0006	.0010	.0025	.0000	.08	2.6	.....	.....	.....	.....
11987	1914 Apr. 9	None	V. slight	V. slight	0.03	.0008	.0024	.0050	.0000	.07	2.3	.....	.....	.....	.....

Belmont.—The town-owned water system consists of a drilled well, two hundred feet, and a number of springs; auxiliary supply from brooks. Water pumped to reservoir of 6,000 gallons; wood mains; one hundred and twenty-five families supplied. (See special report upon the supply.)

Examination of Water from Tap of Town System.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10867	1913 April 7	V. slight	None	None	0.07	.0010	.0026	.0050	.0000	.11	0.7	....	....	0	0
12106	1914 May 13	None	V. slight	None	0.07	.0006	.0020	.0030	.0000	.13	0.6	....	....	0	+

Bennington.—The supply of the Bennington Water Works Company is from springs; auxiliary stream source.

Examination of Water from Tap of Bennington Water Works Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10647	1912 Dec. 1	V. slight	V. slight	Earthy	0.20	.0010	.0030	.0050	.0000	.07	1.2	....	....	0	....
10887	1913 April 9	V. slight	V. slight	V. sl. veg.	0.07	.0010	.0040	.0050	.0000	.12	0.9	....	....	0	....
11367	Aug. 1	Slight	Sl. earth	V. slight	0.07	.0020	.0030	.0025	.0000	.06	0.9	....	....	0	....
11990	1914 Apr. 9	None	V. slight	V. sl. earth	0.05	.0008	.0024	.0050	.0000	.14	0.7	....	....	0	0

Examination of Water from Spring of Monadnock Paper Mills.

10694	1912 Dec. 30	None	None	Sl. earth	0.07	.0010	.0010	.0050	.0000	.08	1.4	0
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Berlin.—There are two private systems, the Berlin Water Company, established in 1892, and the A. B. Forbush supply (1905). The latter consists of springs dug ten feet deep and supplies about twenty families on the east side of the Androscoggin River. (See special report elsewhere on Berlin Water Company's supply.)

Examination of Water from Berlin Water Company's Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
526	1912 Oct. 2	V. slight	None	None	0.55	.0010	.0070	.0050	.0000	.13	0.9	....	....	0	....
10,576	Oct. 28	V. slight	V. slight	None	0.55	.0015	.0070	.0025	.0000	.08	0.4	....	....	0	....
10,640	Nov. 26	V. slight	None	None	0.45	.0010	.0080	.0050	.0000	.07	0.4	....	....	0	....
10,712	1913 Jan. 15	V. slight	V. slight	None	0.35	.0010	.0070	.0100	.0000	.12	0.4	....	....	0	....
10,731	Jan. 27	Slight	V. slight	Earthy	0.35	.0040	.0130	.0050	.0000	.12	0.4	...	...	0	....
10,741	Feb. 2	V. slight	Mod. fine	V. sl. marsh	0.55	.0048	.0132	.0050	.0000	.12	0.6	....	....	0	....
0,834	Mar. 24	Slight	None	Sl. earth	0.35	.0010	.0050	.0050	.0000	.13	0.3	...	....	0	....
10,849	Apr. 2	Slight	V. slight	Dist. earthy	0.45	.0010	.0110	.0050	.0000	.12	0.3	....	....	0	....
10,902	Apr. 14	V. slight	Sl. floc.	V. sl. earth	0.40	.0010	.0100	.0050	.0000	.11	0.1	....	....	0	....
11,016	May 15	V. slight	Sl. floc.	Sl. marsh	0.45	.0010	.0070	.0050	.0000	.10	0.4	....	....	0	...
11,118	June 9	V. slight	Slight	None	0.35	.0010	.0094	.0050	.0000	0.10	0.3	....	....	0	....
11,234	July 12	V. slight	V. slight	Mark woody	0.55	.0010	.0096	.0050	.0000	.10	0.1	....	....	+	....
11,239	July 14	Slight	Mod. floc.	Dist. veg.	0.45	.0010	.0170	.0050	.0000	.08	3.2	....	....	+	...
11,259	July 17	Slight	Sl. floc.	None	0.55	.0010	.0086	.0050	.0000	.10	0.4	....	....	0	....
11,281	July 21	V. slight	Sl. floc.	Sl. arom.	0.35	.0010	.0080	.0050	.0000	.10	0.4	....	....	+	....
11,282	July 21	Slight	Consid. brn. floc.	Decay veg.	0.35	.0020	.0110	.0050	.0000	.12	0.3	....	....	0	....
11,300	July 23	V. slight	Sl. brown floc.	Veg.	0.45	.0010	.0100	.0050	.0000	.11	0.1	....	....	0	....
11,325	July 30	Sl. fine	Sl.	None	....	.0010	.0090	....	....	....	....	....	....	0	....
11,407	Aug. 12	V. slight	Sl. brown floc.	Sl. wood	....	....	....	....	....	....	....	....	....	+	...
11,465	Aug. 20	V. slight	V. slight	None	0.25	.0006	.0070	.0025	.0000	.05	1.1	....	....	0	0
11,466	Aug. 20	None	V. slight	Slight	0.27	.0006	.0080	.0025	.0000	.05	0.9	...	....	0	0
11,540	Sept. 3	None	Sl. earth	None	0.05	.0006	.0010	.0025	.0000	.04	2.2	....	....	0	....

Berlin Water Company's Supply.—Concluded.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,541	1913 Sept. 3	Sl. opal	V. slight	None	0.25	.0006	.0010	.0025	.0000	.04	1.6	....	....	0	....
11,665	Oct. 13	None	Slight	V. faint	0.55	.0014	.0144	.0100	.0000	.05	0.3	....	....	0	0
11,740	Nov. 5	None	Sl. floe.	Slight	0.50	.0008	.0108	.0030	.0000	.10	1.1	....	....	0	....
11,820	Dec. 9	None	Sl. brown floe.	None	0.35	.0008	.0084	.0050	.0000	.69	0.1	....	....	0	0
11,928	1914 Mar. 3	V. slight	V. slight	V. slight	0.55	.0010	.0124	.0050	.0000	.08	0.6	....	....	0	+
12,000	Apr. 13	Sl. opal	V. slight	Sl. swamp	0.40	.0010	.0080	.0050	.0000	.07	0.6	....	....	0	0
12,109	May 13	V. slight	Sl. veg.	V. sl. swamp	0.45	.0008	.0078	.0050	.0000	.07	0.6	....	....	+	+
12,160	May 25	V. slight	V. slight	Sw'mpy	0.45	.0022	.0101	.0030	.0000	.07	0.3	....	....	0	0
12,307	June 30	V. slight	V. slight	None	0.45	.0010	.0034	.0030	.0000	.07	0.7	....	....	+	+
12,414	July 27	V. slight	Coarse floe.	None	0.35	.0006	.0086	.0030	.0000	.07	0.4	....	....	0	0
12,523	Aug. 24	Consid.	Consid.	None	0.50	.0010	.0078	.0050	.0000	.10	0.4	....	....	0	0

Examination of Filtered Androscoggin River Water, Supply of Burgess Sulphite Fiber Co.

11,326	1913 July 30	Mod. fine	Sl. fine	Mouldy	....	.0014	.0110	....	....	....	....	....	....	0	+
12,361	1914 July 14	Mod. fine	Mod.	Dist. swamp	0.60	.0006	.0114	.0030	.0000	.08	1.2	....	....	0	0

Examination of Water from Spring of E. C. Tarr.

11,620	1913 Sept. 23	V. Slight	Sl. floe.	Decid. veg.	0.10	.0006	.0030	.0050	Ft. trac	15				+
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Examination of Water from Spring of D. Coffey.

	1913 Nov. 12	Slight	Sl. brown floe.	None	0.30	.0010	.0064	.0050	.0000	.05	1.9	0
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Examination of Water from Spring owned by Harriman Spring Co.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,777	1913 Nov. 16	Sl. opal	None	Sl. earth	0.07	.0010	.0044	.0100	.0000	.03	4.3	...	....	0	....

Examination of Water from Spring of Emile Boisselle (Mt. Carberry Spring Water.)

12,328	1914 July 9	None	None	Earth	0.00	.0006	.0014	.0030	Ft. trac	.23	1.8	+	+
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Examination of Water from Y. M. C. A. Swimming Pool.

12,362	1914 July 14	None	Consid. wh. gelot.	Sl. foul	0.05	.0030	High	.0030	.0000	.20	2.3	0	0*
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* Sample after refiltering, using coagulant.

Results of Bacteriological Examination of Water Submitted from Brook Supplying Reservoirs of Berlin Water Company.

Number	Date of collection	Source	Bacteria per c. c.		Colon Bacilli	
			Agar 37°C	Agar-gelatin 20°C	(1 c. c.)	(10 c. c.)
12,042	1914 Apr. 22	Brook near lumber camp (running water)	15	700	0	+
12,043	Apr. 22	Brook near lumber camp (still water)	60	950	+	+
12,044	Apr. 22	Reservoir No. 2	4	320	0	0
12,045	Apr. 22	Reservoir No. 1, into which brook flows	9	220	0	0
12,203	June 1	Lower reservoir	.....	.....	0	+
12,204	June 1	Upper reservoir	.....	.....	0	+
12,205	June 1	Brook near lumber camp	.....	.....	0	0

*Bacteriological Examination of Water from Androscoggin River—
Portion of Supply of Berlin Water Company.*

Number	Date of collection	Source	Bacteria per c. c.		Colon Bacilli	
			Agar 37°C	Agar-gelatin 20°C	(1 c. c.)	(10 c. c.)
.....	1913 Sept. 8	River water, raw	1,400	4,700	0	+
.....	Sept. 8	River water, filtered	.....	4,600	0	+
.. . . .	Sept. 8	River water, filtered and treated with bleaching powder	411	16,000*	0	.....
.....	Sept. 22	River water, raw	4,500	10,900	+	.. . . .
.....	Sept. 22	River water, filtered	33	300	0	.....
.....	Sept. 22	River water, filtered and treated with bleaching powder	24	24	0	.....

* Freak result

Bethlehem.—The precinct supply, a gravity system from a stream, furnishes water for 98 per cent of the population.

Examination of Water from Precinct Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10,888	1913 Apr. 10	V. slight	Sl. floe	None	0.10	.0010	.0030	.0025	.0000	.05	0.1	....	....	0	....
11,988	1914 Apr. 8	V. slight	V. slight	Dist. earthy	0.2	.0006	.0078	.0025	.0000	.04	0.1	....	....	+	+
12,023	Apr. 15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0

Boscawen.—The gravity system supplying Boscawen and a portion of Penacook has its source in a pond of three hundred and forty acres. Mains include some wooden pipe. About two hundred families supplied.

Examination of Water from Tap of Penacook & Boscawen Water Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10,912	1913 Apr. 17	V. slight	Mod. wh. gelot	Sour	0.40	.0010	.0080	.0050	.0000	.13	0.7	....	....	0	....
12,003	1914 Apr. 14	V. slight	V. slight	Dist. earth	0.20	.0010	.0074	.0050	.0000	.09	0.7	....	....	0	0

Bristol.—The Bristol Aqueduct Company supplies water through a gravity system from Newfound Lake to three-fourths of the population. Some lead and tin-lined service pipe.

Examination of Water from Supply of the Bristol Aqueduct Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10,883	1913 Apr. 9	V. slight	V. slight fine	None	0.10	.0010	.0050	.0025	.0000	.07	0.4	.000	....	0	....
11,726	Oct. 30	Faint	None	None	0.07	.0006	.0070	.0020	.0000	.08	0.4	....	....	0	...
11,782	Nov. 20	Slight	Sl. veg.	None	0.10	.0010	.0070	.0050	.0000	.07	0.4	...	...	0	....
11,984	1914 Apr. 7	None	V. slight	V. slight marshy	0.10	.0010	.0054	.0050	.0000	.08	0.4	....	....	0	0

Brookline.—A private system from springs, owned by O. D. Fessenden was extended to serve the public in 1912. During 1914 a dug well was added to the system as an auxiliary source.

Neither of the two analyses here given represent water of acceptable quality.

Examination of Water from Supply of O. D. Fessenden.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11683	1913 Oct. 20	Mod. opal	V. slight	None	0.05	.0014	.0154	.0050	.0000	.12	2.4	...	....	0	¹
12528	1914 Aug. 25	Heavy opal	V. slight	None	0.03	.0014	.0034	.2750	Consid.	.45	2.9	....	....	+	²

Examination of Water from Stream used by Public.

11372	1913 Aug. 5	Slight	Slight	None	0.30	.0010	.0130	.0050	.0000	.08	0.4	+
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¹Spring water

²New dug well

Campton.—Following an examination of water supplying “The Maples,” an order was issued directing the removal of the lead pipe in use, the latter being replaced by galvanized iron.

Examination of Water from Spring of J. F. Bedell Supplying “The Maples.”

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11387	1913 Aug. 7	None	None	None	0.05	.0006	.0010	.0025	.0000	.04	0.1	.075	....	0	....
11734	Nov. 7	None	None	None	0.00	.0004	.0036	.0030	.0000	.05	1.5	....	....	0	....

Canaan.—Water is supplied by the Crystal Lake Water Company from Crystal Lake (Hart’s Pond).

Examination of Water from Crystal Lake Water Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10799	1913 Mar. 4	Slight	V. slight	None	0.07	.0020	.0060	.0200	.0000	.10	1.1	....	....	0	....
12104	1914 May 12	V. sl. opal	None	Ft. swamp	0.18	.0010	.0084	.0020	.0000	.08	1.1	....	....	0	0

Examination of Water from Spring of Smith & Richardson used by Public.

11002	1913 May 12	V. faint	V. slight	V. sl. marsh	0.15	.0010	.0090	.0050	Ft. tr.	.03	1.2	.050	0
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Examination of Water from Well of W. B. Hinkley Supplying Lucerne Inn.

12360	1914 July 14	V. sl. opal	Slight	Strong arom.	0.05	.0014	.0040	.0030	.0000	.28	3.6	0
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Candia.—East Candia is supplied by two private systems, viz., the John A. Holt, from an artesian well, and the J. E. Dearborn, from springs. The latter represents water of good quality. The Holt supply is not satisfactory, the abnormal proportion of nitrates and chlorides, as well as degree of mineralization, being indicative of seepage. No sample from this source was received during the past two years.

Examination of Water from Spring of Jenness Dearborn.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10921	1913 April 18	Sl. opal	Sl. white floc.	Dist. earthy	....	.0010	.0020	.0050	.0000	.20	1.4	...	....	0	0
12140	1914 May 21	Sl. opal	Sl. fine	None	...	.0006	.0014	.0600	.0000	.50	1.9	....	....	0	....

Canterbury.—Examination of wells supplying Pleasant View and the Osgood Farm indicated water unsuitable for drinking purposes.

Examination of Water from Well of L. I Chase Supplying Osgood Farm.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,455	1913 Aug. 15	V. slight	None	None	0.07	.0010	.0060	.4000	.0000	7.00	11.0	....	....	+	....

Examination of Water from Well of E. B. Peverley Supplying Maple Knoll.

11,456	1913 Aug. 15	V. slight opal	Slight floc.	None	0.05	.0006	.0010	.0050	.0000	.28	1.9	0
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Examination of Water from Well of J. S. Peverley Supplying Pleasant View.

11,457	1913 Aug. 15	None	Slight coarse	Aro- matic	0.05	.0034	.0050	.3000	Hi'h	2.95	4.6	+
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Carroll.—The following examinations of water and ice represent sources of supply for the Boston & Maine and Maine Central Railroads situated within the town of Carroll. The physical character of ice, sample No. 12,194, cut from Saco Lake, was unsatisfactory.

Examination of Water from Stream Supplying B. & M. R. R. at Twin Mountain.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10,983	1913 May 6	None	V. slight	None	0.15	.0006	.0070	.0025	.0000	.05	0.3	....	....	0	....

Examination of Water from Spring Supplying Maine Central & Boston & Maine Railroads at Fabyan's.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
12,046	1914 Apr. 27	V. slight	None	None	0.15	.0020	.0060	.0050	.0000	.04	0.1	....	....	0	....

Examination of Water from Stream Supplying Maine Central Railroad at Crawford's.

12,185	1914 May 28	None	None	None	0.10	.0006	.0020	.0030	.0000	.06	0.1	0	..
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Examination of Water from Spring Supplying Maine Central Railroad at Quebec Junction.

12,257	1914 June 15	None	V. slight	None	0.00	.0010	.0014	.0030	.0000	.05	0.3	.069	0
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Examination of Ice Cut from Saco Lake Supplying Boston & Maine Railroad at Fabyan's.

12,194	1914 June 3	Slt. opal	Sl. coarse veg.	Slight veg.	0.03	.0010	.0034	.0030	.0000	.08	0.00	....	....	0	....
12,252	June 18	Med.	Slight	V. slight	0.00	.0006	.0014	.0030	.0000	.05	0.00	....	....	0	....

Centre Harbor.—The analyses of the supplies of Lakeview Cottage, Mallard Cottage, and the Majestic indicate water of unsatisfactory quality.

Examination of Water from Spring Supply of S. F. Emery.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,084	1913 June 4	None	V. slight coarse	None	0.03	.0010	.0010	.0050	.0000	.12	5.0	....	....	0	..
12,314	1914 July 4	None	V. slight	None	0.03	.0008	.0014	.0050	.0000	.15	5.1	....	...	0	0

*Examination of Water from Wells of Mrs. Adolfo Munoz, Supplying
Pinelands, Summer School Camp.*

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,227	1913 July 10	Mod. opal	V. slight	Slight earth	0.35	.0006	.0030	.0050	.0000	.07	0.9	....	....	0	....
12,299	1914 June 30	Mod. opal	Slight	None	0.40	.0010	.0034	.0030	.0000	.05	1.7	....	....	0	....
12,300	June 30	V. sl. opal	Slight gelot.	None	0.03	.0006	.0010	.0030	.0000	.08	1.9	....	....	0	....
12,301	June 30	V. sl. opal	Slight fine	Slight foul	0.05	.0014	.0088	.0030	.0000	.05	0.7	....	....	0	†

† From Squam Lake

*Examination of Water from Spring of R. D. Green Supplying The
New Cambridge.*

11,337	1913 July 31	Slight opal	V. slight	Slight arom.	0.05	.0020	.0040	.0050	.0000	.20	2.6	0
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*Examination of Water from Well of M. V. B. Gordon Supplying The
Majestic.*

11,341	1913 July 31	None	None	None	0.15	.0010	.0016	.2500	.0000	1.30	3.9	.010	0	...
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*Examination of Water from Well of W. B. Mallard, Supplying Mal-
lard Cottage.*

11,343	1913 July 31	Mod. opal	Mod. fine	Slight earthy	0.10	.0054	.0070	.2500	Hi'h	1.30	8.9	0
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*Examination of Water from Well of J. F. Moulton Supplying Lake
View Cottage.*

11,346	1913 July 31	V. slight	None	None	0.10	.0010	.0050	.225	.0000	.95	5.0	+	...
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Examination of Water from Sibley Spring used by Kanasatka Inn.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,347	1913 July 31	None	V. slight	None	0.05	.0006	.0006	.0025	.0000	.05	1.8	....	...	0	....

Examination of Water from D. R. Slade Spring.

11,656	1913 Oct. 8	None	Slight	None	0.05	.0004	.0003	.0025	.0000	.05	1.9	0
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Charlestown.—A gravity system from Mill Brook, including two impounding reservoirs, supplies Charlestown village. (See special report concerning this supply.) The supply of North Charlestown is a gravity system from a brook.

Examination of Water from Charlestown Public Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10,869	1913 April 7	None	V. sl. floc	None	0.20	.0010	.0054	.0025	.0000	.10	0.4	...	....	0	....
11,026	May 18	V. slight	Slight	V. slight	0.05	.0014	.0106	.0050	Trace	.09	1.4	....	....	0	....
11,589	Sept. 12	Slight	None	Slight veg.	0.30	.0040	.0124	.0050	.0000	.14	1.5	....	...	0	...
11,601	Sept. 12	Slight	V. slight	V. slight	0.15	.0006	.0110	.0050	.0000	.20	3.9	...	....	0	*
11,712	Oct. 25	V. slight	Slight floc	Earthy	0.20	.0030	.0036	.0025	.0000	.19	1.4	....	....	+	+
11,713	Oct. 25	V. slight	Slight floc	Earthy	0.20	.0012	.0078	.0025	.0000	.19	1.4	....	....	+	+
11,714	Oct. 25	V. slight	V. slight	V. slight	0.15	.0010	.0072	.0050	.0000	.23	1.6	....	....	0	+
11,999	1914 April 14	V. sl. opal	None	V. slight	0.15	.0010	.0054	.0100	.0000	.07	0.6	....	....	0	0*
12,182	June 3	None	V. slight	Strong fish	0.15	.0006	.0134	.0030	.0000	.10	2.6	....	....	0	0

* North Charlestown supply

Chester.—The analysis of the Highland Farm supply indicates a polluted condition.

Examination of Water from Well of A. A. Bean, Supply of Highland Farm.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11294	1913 June 23	None	None	Dist. foul	0.05	.0007	.0034	.5000	.0000	6.70	8.6	....	...	0	....

Examination of Water from Well of Wm. P. Nichols.

12292	1914 June 25	Sl. opal.	Sl. fine	Mark veg.	0.05	.0064	.0024	.007	Tr.	.45	2.3	.010	0
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Examination of Water from Spring owned by B. & A. D. Fessenden.

12326	1914 June 8	V. slight	Sl. silt	None	0.00	.0006	.0016	.225	Ft. tr.	1.80	3.2	0
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Claremont.—The town supply is a gravity system from streams off of Green Mountain, wells dug along the bank of the Sugar River constituting an auxiliary source. Some cement-lined iron pipe used in distribution. There are also two private systems from springs (Bible Hill and Grannis systems). Past examinations of the Bible Hill supply have shown lead in dangerous amount. None of the three samples of ice submitted from Claremont were of acceptable quality, all being of too dirty character to be suitable for introduction into drinking water or foods.

Examination of Water from Town Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10831	1913 Mar. 24	Slight	V. sl.	Earthy	0.30	.0020	.0104	.0050	.0000	.13	0.6	....	....	0	....
11035	May 19	Sl. fine	V. sl. fine	V. slight	0.10	.0010	.0080	.0050	.0000	.11	0.9	....	....	0	....
11322	July 29	None	None	None	0.15	.0010	.0020	.0050	.0000	.28	1.8	....	*	0	....
11547	Aug. 3	V. sl. opal	Slight	None	0.15	.0020	.0050	.0050	.0000	.26	1.6	....	*	0	....
11942	1914 Mar. 12	None	V. slight	Sl. arom.	0.10	.0010	.0080	.0050	.0000	.14	1.6	....	....	0	0
12271	June 24	Sl. opal	Slight	Sl. foul	0.07	.0032	.0080	.0030	.0000	.15	1.5	....	....	0	0

*Wells on Kelsey's Island.

Examination of Water from Spring used by Railroad.

10865	1913 Apr. 4	V. slight	V. slight	None	0.05	.0006	.0020	.0050	.0000	.05	3.7	0	0
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Examination of Water from Spring Supplying Stone Watering Trough.

11631	1913 Sept. 25	None	None	None	0.05	.0008	.0010	.0100	.0000	.20	4.6	+	..
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Examination of Water from Jones's Spring used to Supply Passenger Cars at Claremont Junction.

12144	1915 May 18	None	None	None	0.00	.0010	.0018	.0030	.0000	.05	0.6	0
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Examination of Ice Used by Railroad (cut from pond near station at Claremont Junction).

10876	1913 Apr. 4	Slight	Consid. bl. floe.	Mark. earth	0.08	.0010	.0070	.0025	.0000	.02	0.00	0
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Examination of Ice from Sugar River, Supply of Claremont Ice Co.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11162	1913 June 9	Mod. opal	Consid. white	Strong arom.	0.05	.0010	.0120	.0050	.0000	.03	0.00	....	....	0	....

Examination of Ice from Jones's Pond, Supply Boston & Maine Railroad.

12148	1914 May 25	Slight	Mod. bl. floe.	Slight	0.05	.0014	.0364	.0030	.0000	.06	0.00	0
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Examination of Water from Spring of Edmunds & Frost, used by Public.

10660	1912 Dec. 5	Faint	V. sl.	None	0.00	.0005	.0005	.0025	.0000	.05	4.2	.030	0
10989	1913 May 8	V. sl.	Sl. floe.	Sl. foul	0.05	.0026	.0030	.0050	.0000	.08	4.3	.020	....	0	....

Examination of Spring of Mrs. L. T. Moody, used by Public.

12545	1914 Aug. 31	None	None	None	0.03	.0014	.0020	.0050	.0000	.35	1.9	.060	..	0	...
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Colebrook.—There are two private systems, the J. E. Lombard Water Works, supplying about forty families with water from springs, and the Colebrook Water Company, which constitutes the principal supply. The source of the latter is a stream and springs.

Examination of Water from Colebrook Water Company's Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10903	1913 Apr. 21	V. slight	None	None	0.35	.0006	.0090	.0025	.0000	.09	2.2	....	....	0	....
12056	1914 Apr. 28	None	V. slight	None	0.45	.0006	.0040	.0050	.0000	.04	1.8	....	....	0	0

Concord.—The city supply is derived from Lake Penacook.
(See special report elsewhere.)

Examination of Water from City Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10804	1913 Mar. 7	V. slight	V. slight	V. sl. earth	0.03	.0006	.0070	.0025	.0000	.11	.04	.....	.....	0	...
10955	Apr. 30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....¹	.....	.....	.....
11076	May 26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.040	.....	.....	.....
11058	May 27	V. slight	Sl. fine	Dist. veg.	0.15	.0014	.0070	.0050	.0000	.10	0.1	.....	.....	0	....
11503	Aug 26	V. slight	Sl. fine veg.	Sl. musty	0.05	.0020	.0130	.0050	.0000	.10	0.3	.....	.....	0	....
11822	Dec. 13	V. sl. opal	V. slight	V. sl. marsh	0.03	.0008	.0074	.0050	.0000	.14	0.7	.....	.....	0	0
11932	1914 Mar. 9	Sl. opal	V. slight	Sl. veg.	0.12	.0024	.0094	.0030	.0000	.17	0.7	.....	.....	0	0 ²
11946	Mar. 12	Sl. opal	V. slight	V. slight	0.13	.0020	.0138	.0050	.0000	.23	0.4	.....	.....	0	0 ³
12090	May 9	Mod. fine	Consid. floc. earth	Earthy veg.	0.15	.0012	.0074	.0030	.0000	.15	0.4	.....	.....	0	0
12131	May 19	Slight	Sl. fine	Sl. swamp	0.05	.0010	.0106	.0030	.0000	.14	0.4	.....	.....	0	+
12132	May 19	Slight	Sl. fine	Sl. swamp	0.05	.0010	.0094	.0030	.0000	.14	0.4	.....	.....	0	0
12133	May 19	Slight	Sl. fine	Fishy	0.05	.0008	.0098	.0030	.0000	.14	0.4	.....	.....	0	+
12134	May 19	V. slight	Sl. fine	Swampy	0.05	.0010	.0094	.0030	.0000	.18	0.4	.....	.....	0	+
12135	May 19	V. sl. opal	V. slight	V. sl. fishy	0.05	.0008	.0094	.0030	.0000	.14	0.4	.....	.....	0	+
12141	May 22	None	Sl. floc.	Dist. veg.	0.05	.0010	.0104	.0030	.0000	.13	0.4	.050	.....	0	+
12202	June 8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.035	.....	.....	.....
12216	June 10	V. sl.	Brown floc.	Earthy	0.03	.0006	.0092	.0030	.0000	.13	0.4	.055	.....	0	0
12381	July 17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.100	.....	.....	.....
12508	Aug. 7	Slight	Sl. brown floc.	Earthy	0.05	.0006	.0092	.....	.0000	.20	0.7	.002	.....	+	+
12521	Aug. 24	Consid. fine	Consid. fine	Dist. grassy	0.10	.0006	.0076	.0050	.0000	.13	0.4	.....	.....	0	+

¹ Much lead carbonate in suspension. From private tap, much lead pipe in house.

² Contained bacteria per cc.: 9 at 37°; 960 at 20°

³ Collected from lake just beneath ice. Contained bacteria per cc.: 19 at 37°; 20 at 20°

Examination of Water from Turtle Pond.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11703	1913 Oct. 24	Mod.	Mod. fine veg.	Slight	1.10	.0010	.0194	.0100	Ft. tr.	.04	1.1	....	...	0	....

Examination of Water from Springs of Geo. O. Robinson, East Concord, known as Crystal Spring.

10,759	1913 Feb. 17	None	None	None	0.00	.0008	.0008	.0025	.0000	1.33	3.5	....	....	0	1
10,769	Feb. 21	.....	.....	.....	.....	.....	.....	.....	.....	1.35	3.7	....	....	0	*1
10,862	Apr. 3	None	V. slight	None	0.05	.0006	.0010	.0350	.0000	1.30	2.7	....	....	0	2
10,863	Apr. 3	V. slight	V. slight	None	0.00	.0006	.0008	.0050	.0000	.25	0.3	....	....	0	3
10,892	Apr. 11	None	None	None	0.05	.0006	.0010	.0200	.0000	1.40	3.2	..	...	0	†
11,931	1914 Mar. 7	None	V. slight	None	0.03	.0008	.0018	.550	.0000	1.31	3.6	....	....	0	‡1
11,947	Mar. 12	None	None	None	0.02	.....	.....	.575	.....	1.34	3.7	....	...	0	‡1

1 From bottle as supplied by distributor.

2 Sample taken from large spring near railroad.

3 Sample taken from spring in woods.

* Contained 20,000 bacteria per c. c. at 37°C.

† Contained 420 bacteria per c. c. at 37°C.

‡ Each contained one bacterium per c. c. at 37°C.

Examination of Water from Well of Concord Gun Club.

11,438	1913 Aug. 15	Heavy opal	Con. fine	Earthy	0.35	.0010	.0030	.0100	Hi'h	.25	5.3	0
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Examination of Water from Spring of Concord Electric Co.

11,341	1913 Dec. 31	None	V. slight	None	0.03	.0006	.0014	.0050	V.ft. trac	.30	1.9	0
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Examination of Water from Spring at State Prison.

10,753	1913 Feb. 13	None	None	None	0.00	.0006	.0006	.0025	.0000	.18	0.1	0
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Examination of Water from Well at Penacook Lake Park.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Baeilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,057	1913 May 27	None	Sl. fine	None	0.03	.0010	.0136	.0100	.0000	.40	1.2	....	....	0	....

Examination of Water from Sugar Ball Pond, East Concord.

11,736	1913 Nov. 4	Slight	Mod. floc.	None	0.03	.0010	.0054	.0030	.0000	.20	0.6	0
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Examination of Water from Well at Pineholm, Supply of Friendly Club.

12,274	1914 June 23	Heavy	Heavy brown	V. mark veg.	1.60	.0006	.0200	.0030	.0000	.25	1.7	0
12,519	Aug. 21	Mod.	Consid. br. floc.	Extreme veg.	0.30	.0156	.0202	.0050	.0000	.95	1.6	....	....	+	....

Examination of Water from Well of Kearsarge Club.

12,462	1914 Aug. 11	Mod.	Consid. floc.	Earthy	0.20	.0014	.0030	.0050	.0000	.08	1.5	...	Con sid.	9
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Examination of Ice from Horse Shoe Pond, Supplied to Boston & Maine Railroad.

10,838	1913 Mar. 31	Slight	Consid. coarse veg.	Earthy	0.05	.0040	.0034	.0025	.0000	.03	0.0	0
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Examination of Ice from Fort Eddy Pond, Supplied to Boston & Maine Railroad.

10,839	1913 Mar. 31	Slight	Sl. black	V. sl. earth	0.05	.0046	.0036	.0025	.0000	.02	0.0	....	....	0	....
12,087	1914 May 7	None	Slight	None	0.02	.0020	.0028	.0030	.0000	.03	0.0	....	....	0	0

Conway.—Conway village supply (Conway Aqueduct Company) is from springs.

The villages of North Conway, Intervale and Kearsarge are furnished by the North Conway Water and Improvement Company with water from mountain brooks off Hurricane Mountain, there being three storage reservoirs.

Examination of Water from Faucet of Conway Aqueduct Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10,461	1912 Sept. 5	None	None	None	0.0	.0005	.0005	.0025	.0000	.05	0.1	....	....	0	....
11,191	1913 June 25	Mod. opal	Heavy brown floe	Foul	0.25	.0090	.0090	.0200	.0000	.07	0.3	....	....	0	0a

a. Taken from dead end of main.

Examination of Water from North Conway Precinct.

10,945	1913 April 28	V. slight	V. slight	Sl. earthy	0.10	.0006	.0016	.0050	.0000	.04	0.1	....	....	0	....
12,068	1914 May 4	None	V. slight	V. slight	0.0	.0010	.0022	.0030	.0000	.03	0.1	....	....	0	0

Examination of Water from Pond from which is cut Ice Supply of Conway.

10,716	1913 Jan. 19	V. sl. opal	V. slight	Marshy	0.25	.0020	.0100	.0050	.0000	.05	0.1	+
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Examination of Water from Well of A. E. H. Brooks, Supply of Echo Farm.

11,410	1913 Aug. 13	Slight opal	Mod. fine	Sl. marsh	0.05	.0006	.0010	.0050	.0000	.07	2.7	0
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Examination of Water from Stream, Supply of Lacey Farm.

11,422	1913 Aug. 12	None	None	Sl. slate	0.15	.0006	.0030	.0050	.0000	.05	0.1	0
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Examination of Ice from Echo Lake, Supply of Boston & Maine Railroad.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10,875	1913 April 8	V. slight	V. slight	Mouldy	0.05	.0010	.0010	.0025	.0000	.03	0.0	...	....	0	....

Derry.—The town supply is taken from a series of wells, the water being pumped to a standpipe of 180,000 gallons capacity. (See special report elsewhere.)

Examination of Water from Town Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10,788	1913 Mar. 5	Slight	Slight	Sl. earth	0.07	.0010	.0015	.0150	.0000	1.40	8.2	....	...	0	...
11,075	May 29	None	V. slight	None	0.05	.0015	.0020	.0250	.0000	1.05	8.5	....	....	0	....
12,001	1914 April 14	None	Mod. earth	None	0.02	.0010	.0034	.0850	.0000	1.02	2.9	....	...	0	0
12,055	April 29	None	V. slight	None	0.03	.0010	.0030	.1000	.0000	1.01	2.9	....	....	0	0

Examination of Samples of Water collected from Horne and Beaver Brooks at various points.

11,154	1913 June 18	V. slight	Mod. flocc.	Earth arom.	0.08	.0010	.0034	.0100	.0000	.27	1.2	...	....	0	+ ¹
11,155	June 18	V. slight	Mod. gelot.	Leather	1.40	.0020	.0290	.0100	.0000	.27	0.7	....	...	+	+²
11,156	June 18	Heavy	Heavy gelot.	Mark foul	2.00	.0024	.0410	.0150	.0000	.65	1.9	....	...	+	+³
11,157	June 18	Slight	Mod. br. flocc.	Arom.	0.45	.0026	.0190	.0100	.0000	.25	1.1	...	....	+	+⁴

¹ Horne Brook, above pond.

² Horne Brook, at dam above leather-board mill

³ Horne Brook, near lumber mill.

⁴ Beaver Brook, at emergency intake.

*Examination of Water from Well of Mrs. F. W. Tinker, Supplying
Beaver Lake House.*

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,142	1913 June 17	None	None	Dist. veg.	0.08	.0040	.0050	4.500	Very high	21.50	51.5	....	....	0	0

Dover.—During 1908–09 the city of Dover installed a covered slow sand filter, consisting of two beds each of 0.2 acre net area. The raw water consists of a mixture of about 400,000 gallons daily pumped from Willand Pond, together with from 100,000 to 200,000 gallons from Hussey Springs by gravity flow. The latter water is impregnated by iron, some of which settles out in the settling basin from the aëerator, the balance going on to the filters, where it is retained at the surfate as a very compact red mud. The process is effective in removing all but unobjectionable traces of the iron, although the water of certain individual springs is so highly ferruginated that it cannot be utilized without rapidly overburdening the filters.

The superintendent states that it is the practice to rake the surface of the filters at intervals of three weeks, an inch of such surface being cleared off and rejected (not washed) four or five times annually, this sand being replaced by new, following a removal of six or eight inches. Notwithstanding the greater burden of suspended matter placed upon them, these filters work at a higher rate than at Somersworth.

Recent bacterial counts made on the Dover water supply have revealed a remarkable and unexpected circumstance. As previously stated, this water consists of a mixture in varying proportions of Willand Pond water with a spring water that is highly charged with iron and is at times acid in character. The pond water, pumped during twelve hours of the day, and constituting the larger volume, enters a twelve-inch gravity line from the springs, the distance from the point of mingling to the discharge at the aëerator pipe being 3,400 feet. After leaving the settling

chamber following aëration, the water passes through the filters to the receiving basin, at which point the volume is augmented by about 100,000 gallons representing the discharge of two 300-foot artesian wells. The table on page 52 shows the bacterial content of this water, also its reaction to acid and alkali, cold and after boiling, using two indicators.

Notwithstanding that the larger part of the supply comes from a surface source containing the number of bacteria usually found in any water of this class, yet it appears from the above data that as a result of mixing with the springs supply, the water as discharged from the main into the aërating chamber and *before filtration*, is nearly sterile. So far as the results indicate, the mixed water, before reaching the filter-bed, contains less than one per cent of the bacteria originally present in the pond supply. Obviously, this is due to some influence wielded by the springs water apart from mere dilution. It can scarcely be attributable in any marked degree to the mechanical agency involved in flocculation of the iron, because during the comparatively rapid course of the water through the main, there is little opportunity for sedimentation, and in the laboratory examination the floccules are thoroughly disintegrated before plating. Neither is the existence of a trace of acidity of itself a plausible explanation. The conclusion seems justified that the iron present plays the role of a disinfectant—this notwithstanding that iron salts, even in moderately strong solution, are not accredited with the possession of any very notable disinfecting qualities.

It is possible that the form of combination may have some influence in this connection. It seems improbable that the iron originally present exists altogether as simple bicarbonate. Not only is there no extensive precipitation of iron noticeable at the

Results of Examination of Dover Water Supply for Bacteria and Acidity.

Date (1913)	Source	Bacteria per c. c.		B. coli (1 c. c.)	Reaction of 100 c. c. with ^N ₅₀ neutralizer, using:		
		at 37° C	at 20° C		Methyl Orange	Phenolphthalein	
						Cold	After boiling
Sept. 15	*Aëerator pipe (pond and springs water)	3	20	Negative	.....	.....	.....
	*Settling chamber.....	3	19	Negative	.....	.....	.....
	†Receiving basin (filtered)	1	3	Negative	.....	.....	.....
	† " " "	0	9	Negative	.....	.....	.....
Oct. 7	*Aëerator pipe.....	1	10	Negative	alkaline	0.50 acidity	.....
	*Settling chamber.....	0	0	Negative	alkaline	0.35 acidity	.....
	†Receiving basin.....	1	7	Negative	alkaline	1.90 acidity	.....
	† " " "	1	7	Negative	alkaliue	1.90 acidity	.....
Oct. 14	*Aëerator pipe.....	1	3	Negative	1.30 alk.	0.80 acidity	Faintly alk.
	*Settling chamber.....	0	10	Negative	0.80 alk.	0.50 acidity	Faintly alk.
	†Receiving basin.....	2	17	Negative	0.40 alk.	1.00 acidity	0.90 acidity
	†Tap, main pump station	1	20	Negative	0.30 alk.	0.90 acidity	0.80 acidity
Oct. 16	†Willand pond.....	85	2700	Doubtful	0.90 alk.	0.20 acidity	Faintly alk.
	*Aëerator pipe.....	1	21	Negative	0.90 alk.	0.50 acidity	Faintly alk.
	†Receiving basin.....	1	4	Negative	0.40 alk.	0.60 acidity	0.40 acidity
	†Tap, city building... ..	3	9	Negative	0.30 alk.	0.80 acidity	0.80 acidity
Oct. 22	†Willand pond.....	26	3000	Positive	0.70 alk.	0.20 acidity	Faintly alk.
	*Aëerator pipe.....	4	12	Negative	0.80 alk.	1.10 acidity	0.10 acidity
	†Receiving basin.....	1	9	Negative	0.35 alk.	0.60 acidity	0.40 acidity
	†Tap, city building.....	3	20	Negative	0.20 alk.	0.80 acidity	0.80 acidity

*Consists of *unfiltered* mixture of pond and springs water.
†Pond and springs water after filtering, together with some artesian-well water.
‡Includes no springs water.

springs themselves, but some recent experiments tend to show that the iron in the original water is not very readily precipitated by aëration alone. Nevertheless, on mixing with the pond water such precipitation commences immediately, it being noted that such is already well advanced at the moment of discharge from the main into the aërating chamber.

The table on page 54 contains the results of some chemical examinations. From the reaction data appearing in the two tables, it does not appear that the acidity is due merely to the presence of iron salt. On the contrary, as is evident from the results presented, such acidity seems to develop in the filtered water from which the iron has been separated, being apparently due to some decomposition process resulting in the formation of a non-volatile acid of organic character. Whether such was originally in combination with the iron, or represents an independent

by-product generated from the dissolved peaty matter, has not been determined. While it is claimed that the acidic character is most noticeable following a rainy period, yet this peculiarity is so very erratic in its manifestations that no definite hypothesis concerning its mode of development is advanced.

As a rule, the unfiltered water is alkaline to methyl orange, but the degree of such alkalinity tends to approach the neutral point as a result of filtration and standing in the mains. Although most of the phenol phthalein acidity before aëration seems to be due to free carbonic acid merely, yet it is noticeable that the water later develops a variety of acidity to phenol phthalein that is not discharged by boiling.

While there has been some corrosion of the mains, the principal complaint coming to our attention has been in connection with "hardness," and the action upon hot water tanks, the dissolved copper causing the water to turn blue with soap. Obviously, the use of lead pipe with water of this character is to be especially avoided.

Yet, notwithstanding its somewhat unusual character and the rather fearsome suggestiveness contained in its action upon pipe, there is no good ground for claiming that the use of this water is likely to prove deleterious to health. Free carbonic acid, present in some degree in all water, has a well defined corrosive action upon metals, yet when ingested by the human system, its effects are regarded as beneficial.

As previously stated, the acid character here discussed is not constant, being dependent partly upon the use of certain individual units of the springs supply, partly upon seasonal conditions. It seems probable, however, that the application of an alkaline treatment would be advisable at times, although a better remedy would be in planning the abandonment of all but the best of the springs supply, in selecting the additional source which the increased needs of the city will render eventually necessary.

*Results of Chemical Examination of Dover Water Supply, Showing
Content of Iron and Acidity.*

(Except where indicated, samples represent varying mixtures of pond and springs water with
some artesian-well water)

(Parts in 100,000)

Date of collection	Source	Residue		Ammonia		Chlorine	Hardness	Iron	Reaction of 100 c. c. with $\frac{N}{50}$ neutralizer, using:		
		Total	Fixed	Free	Albuminoid				Methyl Orange	Phenolphthalein	
										Cold	After Boiling
1909 Dec. 22	Receiving basin (filtered)	8.5	6.0	.0020	.0070	.55	3.9	.....	1.10 acidity	.....	.....
	Tap, City building	12.5	9.0	.0025	.0040	.55	4.7	*	0.50 alk.	.....	.....
1910 Jan. 21	Receiving basin (filtered)	6.0	4.0	.0045	.0025	.60	1.9	trace	alkaline	.....	.....
April 15	Receiving basin (filtered)	16.2	9.9	.0312	.0054	.79	9.3	.088	3.00 acidity	21.0 acidity	20.00 acid.
	Aerator pipe (un-filtered)	19.8	11.1	.0310	.0088	.91	9.3	1.600	2.50 acidity	28.00 acid.	25.00 acid.
	Cold water tap, 56 Atkinson St.)	9.7	7.2	.0004	high	.74	4.4	.035	0.30 acidity	9.00 acidity	9.00 acidity
	Hot water tap, 56 Atkinson St.)	11.1	8.3	.0012	.0120	.66	5.7	0.40†	0.30 acidity	7.00 acidity	7.00 acidity
1911 Nov. 9	Tap, City building	6.9	6.0	.0010	.0015	.44	2.6	.020	1.10 alk.	.....	.....
	Receiving basin (filtered)	7.5	5.0	.0015	.0015	.42	2.7	.015	1.00 alk.	.....	.....
	Tap in City.....	7.0	5.5	.0020	.0015	.42	2.6	.020	1.10 alk.	.....	.....
1912 Aug. 3	Hussey well, (iron springs, no pond water)	7.0	6.2	.0110	.0010	.75	2.0	much	.....	.....	.....
1913 Jan. 2	Receiving basin (filtered)	13.1	11.0	.0012	V. high	.65	5.0	.010	0.70 acidity	3.50 acidity	3.30 acidity
July 10	Aerator pipe.....	.....	.....	.0100	.0030	.65	2.0	.450	1.20 alk.	1.20 acidity	Ftly. alk.
	Receiving basin (filtered)	.....	.....	.0020	.0080	.50	1.5	.025	1.00 alk.	0.10 acidity	Ftly. alk.
Oct. 22	¶ Willand pond (no spring water)	4.2	3.2	.0030	.0164	.45	1.2	.015	0.80 alk.	0.20 acidity	Ftly. alk.
	§ Hussey well, (no pond water)	6.3	5.0	.0024	.0094	.50	1.5	.350	0.50 alk.	1.50 acidity	0.40 acidity
	|| Aerator pipe (pond and springs)	7.8	6.5	.0020	.0084	.50	2.2	.200	0.70 alk.	1.50 acidity	0.20 acidity
Oct. 27	Welch school (dead end)	.....	.....	.0010	.0056	.55	3.6	1.200	1.60 alk.	0.50 alk.	0.50 alk.

*0.8 part zinc, apparently taken up from pipe by earlier acid condition at this date

†Water turned blue with soap; contained distinct trace of copper

‡Contained sulphuric anhydride, 1.13 parts

§Contained sulphuric anhydride, 1.24 parts

|| Pond water pump just started. Apparently consists largely of springs water

Ragnor Brook, North of County Farm Road.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11253	1913 July 17	Consid.	Consid. floc.	None	0.45	.0020	.0070	.005	.0000	.25	1.4	....	.040	0	....

Kelly Spring Supply, Bubble Fountain, Locust St.

11135	1915 June 10	Consid. opal	Consid. ferrug	None	0.45	.0010	.0030	.005	.0000	.15	0.3250	0
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Main Public Supply System, at Dead End.

11684	1913 Oct. 17	Sl. opal	None	None	0.15	.0010	.0050	.010	.0000	.50	2.6	0
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Upper Section, Willand Pond, near Driving Park.

11378	1913 Aug. 5	Slight	Mod. floc.	Sl. disagr.	0.40	.0020	.0150	.010	.0000	.30	1.1040	0	+
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Cocheco River at Horne's Hill.

11735	1913 Nov. 3	Slight	Consid. floc.	Sl. veg.	0.60	.0044	.0192	.003	.0000	.50	1.2050	+	+
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Ice Supplied B. & M. R. R. by Dover Ice Company, cut from Cocheco River.

12259	1914 June 6	Consid. opal	Mod. bl. floc.	None	0.00	.0010	.0024	.003	.0000	.05	0.0	0
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Durham.—Water is furnished to the college and to the village from four systems. The principal supply, known as the Durham Spring Water Company (Petree supply), consists of five dug and drilled wells, the water of which is pumped to a stand-pipe of 7,000 gallons capacity. One mile of distributing mains; about one half of the village, is supplied from this source.

The New Hampshire College of Agriculture and Mechanic Arts is supplied by a drilled well 265 feet deep, with a capacity of 40 gallons per minute. Water from the well, and in emergency from a pond, is pumped into a standpipe of 10,000 gallons capacity. There is about one half mile of distributing mains.

The Durham Water Works (Burnham system) now buys water from the private deep drilled well of Mrs. Shirley Onderdonk. This water is pumped into a standpipe of 4,000 gallons capacity, and supplies about one tenth of the village. There are about 1,000 feet of distributing mains.

The George Hoitt system consists of two dug wells ten feet deep and a deep drilled well with a capacity of 18 gallons per minute. The water from this cistern is pumped into a standpipe of 6,500 gallons capacity and supplies about one fourth of the village. There are about 15,000 feet of distributing mains.

Examination of Water from Pettie System.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10621	1912 Nov. 19	Sl. opal	Slight	Sl. earth	0.05	.0010	.0015	.1250	.0000	1.70	6.0	....	....	+	....
10649	Dec. 3	Mod. opal	Sl. earth	Dist. earth	0.15	.0045	.0050	.0100	Ft. tr.	.70	5.1	....	....	+	....
10651	Dec. 3	Sl. opal	Sl. clay	Sl. earthy	0.05	.0015	.0030	.0350	.0000	3.30	6.7	....	....	0	....
10652	Dec. 3	None	V. slight	None	0.03	.0020	.0020	.0100	.0000	1.15	5.3	....	....	0	....
10670	Dec. 9	None	Sl. floe.	None	0.00	.0015	.0020	.0050	.0000	1.15	5.3	....	....	0	....
10782	1913 Feb. 20	V. slight	V. slight	Sl. earth	0.07	.0020	.0010	.0400	.0000	.73	3.6	....	....	0	....
11706	Oct. 25	Ft. opal	Slight	None	0.05	.0010	.0024	.0050	.0000	1.10	6.0	....	....	0	....
11796	Nov. 27	None	None	None	0.00	.0010	.0020	.0050	.0000	1.15	6.4	....	....	0	0
11810	Dec. 4	None	V. slight	None	0.03	.0016	.0020	.1250	.0000	1.95	6.0	....	....	0	....

Examination of Water from Well of George Hoitt.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c.c.	10 c.c.
10650	1912 Dec. 3	V. sl. opal	None	None	0.20	.0010	.0055	.0250	.0000	.75	4.6	....	....	+	....
11705	1913 Oct. 24	Consid. opal	V. sl. earthy	Earthy	0.55	.0010	.0186	.0100	Ft. tr.	.85	6.3	....	....	+	....
11729	Nov. 1	Sl. opal	None	None	0.20	.0020	.0100	.0050	.0000	.65	5.0	..	....	+	....

Examination of Water from Onderdonk Supply.

10594	1912 Nov. 4	None	V. slight	None	0.00	.0010	.0010	.0100	.0000	2.45	8.9	....	....	0	....
10595	Nov. 4	None	None	None	0.00	.0010	.0010	.0100	.0000	2.45	9.3	....	....	0	....
10973	1913 Apr. 4	None	V. slight	None	0.05	.0010	.0020	.0100	.0000	1.95	7.1	0.00	....	0	....
11702	Oct. 23	None	None	None	0.05	.0010	.0014	.0050	Ft. tr.	2.10	9.6	....	....	0	....

Examination of Water from Artesian Well of New Hampshire College.

10653	1912 Dec. 3	None	None	None	0.00	.0010	.0010	.0050	.0000	2.95	6.0	....	....	0	....
10671	Dec. 9	None	None	None	0.00	.0010	.0010	.0050	.0000	2.90	5.7	....	....	0	....
11701	1913 Oct. 25	None	None	None	0.03	.0026	.0034	.0100	.0000	2.30	5.4	....	....	0	....

Examination of Water from Well Supplying Gamma Theta Fraternity.

10672	1912 Dec. 9	Consid. opal	None	None	0.35	.0010	.0090	.250	Ft. tr.	.65	6.0	....	....	+	....
10692	Dec. 20	Consid. opal	None	Sl. earth	0.30	.0010	.0085	.250	.0000	.65	6.0	....	....	+	....

Enfield.

Examination of Water from Tap of Enfield Aqueduct Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
12492	1913 Aug. 17	None	V. slight	None	0.03	.0003	.0016	.1000	.0000	.45	5.3	.018	....	0	....

Examination of Water from Well of Baltic Mills.

11504	1913 Aug. 25	None	None	None	0.05	.0010	.0020	.0350	.0000	.35	3.4	0
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Epping.

Examination of Water from Well of A. W. Mitchell, used by Public.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
12208	1914 June 14	V. slight	Consid. earth	Earthy	0.07	.0012	.0038	.600	Tr.	2.25	5.0	....	....	+	....

Exeter.—The Exeter Water Works derives its supply from an impounded brook. Shores and bottom of impounded area very clayey. Mechanical filtration employed. Water is pumped to a standpipe of 211,000 gallons. Supplies nine hundred families, or 95 per cent of population. (See special report elsewhere.)

Exeter Water Works.

Number	Date of Collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Alkalinity	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c.c.	10 c.c.
10,893	1913 April 11	Slight	Consid. fine wh.	Sl. earthy	0.05	.0010	.0046	.0100	.0000	.35	2.6	.....	.....	0	.....
12,026	1914 April 20	V. slight	sl. white	Sl. earthy	0.05	.0010	.0034	.0070	.0000	.42	2.4	.....	.....	0	0
* 1	1913 Jan. 11	Consid.	.....	Ft. veg.	0.85	.0040	.0252	.0010	.0000	.36	2.7	1.20	.020	0	.....
* 2	Jan. 11	V. slight	.....	Ft. veg.	0.25	.0110	.0136	.0060	.0001	.53	4.4	2.00	.005	0	.....
* 1	Feb. 20	Consid.	.....	.....	0.74	.....	.....	.....	.....	.....	.....	2.40	.....	.....	.....
* 2	Feb. 20	V. slight	.....	.....	0.03	.....	.....	.....	.....	.....	.....	1.9	.....	.....	.....
* 1	April 9	Consid.	.....	Ft. veg.	0.90	.0022	.0260	.0800	.0000	.52	2.6	0.60	.045	0	+
* 2	April 9	V. slight	.....	None	0.03	.0024	.0068	.0640	.0000	.52	3.2	0.20	.010	0	.....
* 1	April 24	Consid.	.....	.....	0.80	.....	.....	.....	.....	.....	.....	1.10	.....	.....	.....
* 2	April 24	Slight	.....	.....	0.64	.....	.....	.....	.....	.....	.....	1.10	.....	.....	.....
* 1	June 12	Consid.	.....	F. veg.	0.90	.0020	.0308	.0040	.0000	.42	2.7	2.10	.065	0	+
* 2	June 12	Slight	.....	None	0.45	.0024	.0178	.0060	.0001	.42	3.2	1.30	.040	0	.....
* 3	July 1	Consid.	.....	Ft. veg.	0.90	.0026	.0292	.0000	.0000	.41	2.8	2.20	.27	.....	.....
* 2	July 1	Slight	.....	Ft. veg.	0.80	.0156	.0186	.0000	.0001	.43	3.4	1.70	.070	.....	.....
* 2	Aug. 8	V. slight	.....	.....	0.10	.....	.....	.....	.....	.....	.....	1.30	.025	.....	.....

* Analysis by Robert Spurr Weston

¹ Raw water supply² Tap³ Reservoir*Examination of Water from Spring of John Callahan.*

11 250	1913 July 7	None	Sl. veg.	None	0.05	.0010	.0010	.0200	.0000	.45	7.1	0
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Farmington.—The precinct supply is derived from three large dug wells located near the banks of a power canal, a certain amount of water from which is believed to reach the largest of

these wells by seepage. On rare occasions, resort has been made to direct draft from the canal, the water syphoned therefrom being allowed to reach the wells following seepage through a natural adjacent sand bed. Daily capacity of this supply given as 1,000,000 gallons, pumped to a reservoir of 1,000,000 capacity. Furnishes water to about three hundred families.

The J. A. Fletcher supply, derived from one artesian well and one large dug well, furnishes water to about fifty families.

Examination of Water from Farmington Precinct Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrat ^s	Nitrites					1 c. c.	10 c. c.
10,900	1913 April 13	V. slight	Slight	None	0.15	.0010	.0050	.0025	.0000	.25	0.6	....	....	0	....
12,205	1914 April 20	V. slight	V. slight	Sl. earth	0.25	.0006	.0048	.0050	.0000	.14	0.6	....	....	0	0

Examination of Water from Supply of James A. Fletcher.

12,198	1914 June 4	V. slight	V. slight	Ft. earthy	0.15	.0020	.0082	.225	.0000	1.35	2.9	....	....	0	0
12,246	June 17	Mod. opal	Mod. grey floe.	None	0.35	.0006	.0110	.0100	.0000	.60	2.0	....	....	0	+
12,318	July 6	V. slight	Sl. earth	Slight	0.45	.0024	.0194	.0030	.0000	.45	2.3	....	....	0	+

Examination of Water from Well in Edgerly Park.

12,195	1914 June 4	None	None	None	0.00	.0006	.0014	.6000	.0000	3.00	5.3	....	....	0	....
12,425	July 29	None	V. slight	None	0.00	.0006	.0018	.600	.000	2.90	5.3	....	....	0	....

Examination of Water from Well owned by Natl. Horne Estate.

12,197	1914 June 4	None	V. sl. floe.	Decid. foul	0.05	.0024	.0048	.1250	Tr'e	.90	1.9	....	....	0	....
12,289	June 25	None	V. slight	Mark foul	0.00	.0042	.0070	.0500	.0000	.80	2.0	....	....	0	....

Examination of Water from Well on Central Street, used by Public.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
12,288	1914 June 25	None	V. slight	Dist. foul	0.00	.0024	.0020	.0300	.0000	.85	4.6	.....	.....	0	.....

Well of William H. Nute.

10,476	1912 Sept. 13	Slight	Consid. ferrug	Sl. veg.	0.05	.0008	.0046	.0500	.0000	.65	1.8	C'n sid.	0
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Fitzwilliam.*Examination of Water from Well of Congregational Church.*

11,101	1913 June 4	Very slight	Very slight	None	0.10	.0044	.0060	.0350	High	1.00	6.3	.010	0
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Examination of Water from Spring of John Cross.

11,134	1913 June 13	V. slight	V. slight	V. slight	0.07	.0006	.0010	.0025	.0000	.08	0.4	.060	0
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Francestown.—The gravity system of the Francestown Water Company furnishes water through enameled iron pipe from a spring to twenty families, one tenth of the population.

Examination of Francestown Water Company Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10,926	1913 April 7	V. slight	V. sl. sand	Sl. earth	0.05	.0006	.0010	.0025	.0000	.11	1.5	.....	.....	0	.....
12,047	1914 April 27	None	None	None	0.00	.0006	.0020	.0050	.0000	.10	1.1	.....	.....	0	0

Franconia.—The Franconia Water Company supplies water to fifty families by a gravity system having its source in a spring on Mt. Thayer.

Examination of Water from Franconia Water Company Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10,906	1913 April 15	V. slight	V. sl. fine	Sl. earth	0.00	.0006	.0010	.0025	.0000	.06	1.1	.020	...	0	....
12,006	1914 April 10	None	V. slight	Dist. arom.	0.03	.0006	.0014	.0050	.0000	.05	0.9	.030	...	0	0

Franklin.—The supply of the city of Franklin is derived mainly from a series of springs, the divisions of the system being known as the Coldbrook, Elkins and White. Water is also obtained from tubular wells on the bank of the Pemigewasset River, and from the river itself, following filtration, during times of drought. (See special report elsewhere.)

Examination of Water from Town Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10,606	1912 Nov. 8	Mod- erate	Mod. ferrug	None	0.03	.0010	.0020	.0050	.0000	.12	1.2	...	....	0	....
10,918	1913 April 17	None	None	None	0.05	.0014	.0020	.0100	.0000	.10	1.2	....	....	0	....
11,202	July 1	None	None	None	0.05	.0010	.0010	.0100	.0000	.13	1.0	....	....	+	....
11,230	July 14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0
11,373	Sept. 10	None	V. slight	None	0.20	.0010	.0020	.0100	.0000	.18	1.4	....	....	0	....
11,865	1914 Jan. 15	V. slight	Slight	None	0.05	.0008	.0012	.0050	.0000	.13	1.2	....	....	0	....
11,905	Feb. 2	V. slight	Slight	Marshy	0.25	.0018	.0082	.0100	.0000	.08	1.1	....	....	0	+
11,914	Feb. 23	V. slight	None	Sl. musty	0.20	.0008	.0050	.0050	.0000	.12	0.9	.02	....	0	0
11,926	Mar. 3	Sl. opal	Mod. earth	Ft. earthy	0.12	.0010	.0048	.0050	.0000	.13	1.4	....	....	0	0
11,943	Mar. 13	None	V. sl. fine	None	0.02	.0006	.0008	.0050	.0000	.24	1.2	....	....	0	0a
11,944	Mar. 13	None	None	None	0.02	.0006	.0020	.0050	.0000	.14	0.7	....	....	0	0b
11,945	Mar. 13	None	V. slight	None	0.02	.0008	.0018	.0050	.0000	.24	1.4	....	....	0	0c

* Pemigewasset River
a Elkins Spring
b Cold Brook Spring
c White Well

Examination of Water from Mill Pond used at Main-Street Station,
Boston & Maine Railroad.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10,504	1912 Sept. 25	None	Sl. flocc.	None	0.15	.0010	.0015	.0050	.0000	.05	1.9	0.20	....	+	....

Well of Hector Morin.

12,035	1914 April 2	None	None	None	0.00	.0010	.0054	.5000	.0000	.95	5.3	.020	0
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Well of Elizabeth Clement.

11,324	1913 July 30	None	None	None	0.05	.0010	.0020 Ev	.100	High	1.05	1.9	.010	+
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Spring Supplying Hospital.

10,598	1912 Nov. 4	V. slight	Sl. flocc.	None	0.05	.0005	.0005	.0050	.0000	.25	2.6	sm.	0
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**Bacteriological Examinations of Water from Franklin Supply.*

Date of Collection	Source	Bacteria per c.c.		Colon Bacilli	
		Agar (37°c)	Agar Gelatin (20°c)	1 c.c.	10 c.c.
1914					
Feb. 12	Tap pumping station (filtered)	1	30	....	....
Feb. 12	Tap pumping station (filtered)	1	20	....	....
Feb. 12	River (raw water)	7	100	....	....
Feb. 12	River (raw water)	6	100	....	....
Feb. 18	River water (raw water)	8	410	+	....
Feb. 18	River water (raw water)	11	430	+	+
Feb. 18	Tap Bow Street station	5	38	0	....
Feb. 18	Tap Judkins & Wallace's store.....	6	43	0	....
Feb. 23 ¹	Tap Judkins & Wallace's store(filtered).....	256	418	0	0
Feb. 23	Tap Bow Street station (filtered).....	1	87	0	0
Feb. 23	River (raw water)	38	30	+	+
March 5	River (raw water)	18	1,100	+	+
March 5	River (raw water).....	30	600	0	+
March 5 ¹	Tap Judkins & Wallace's store.....	107	10	0	0
March 5	Bow Street station	2	100	0	0

* While the Pemegewasset River at Franklin is apparently not a badly polluted stream under normal conditions, yet at the time these samples were collected very cold weather prevailed, a fact doubtless having some bearing upon the rather unexpectedly 37 degree counts obtained.

¹ As possibly bearing upon the relatively high 37° counts here obtained, it may be stated that these samples represent water from pipes exposed in rather unusual degree to the warmth of the building.

Freedom.

Examination of Water from Spring of J. E. Perkins, Supplying Prospect House.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,425	1913 Aug. 13	None	Mod. earth	None	0.05	.0006	.0010	.0050	.0000	.04	1.9	.040	....	0	....

Examination of Water from Spring of Mrs. J. P. Gordon, Supplying Hotel Elms.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,426	1913 Aug. 13	Sl. opal	V. sl.	None	0.05	.0006	.0014	.0050	.0000	.05	0.4	.050	....	0	....

Fremont.

Well Water Supplying Schools.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,828	1913 Dec. 14	Sl. opal	Consid. veg.	Strong veg.	0.07	.0006	.0048	.0050	.0000	.70	3.2	....	....	0	....

Goffstown.—The precinct gravity system is derived from two spring-fed reservoirs located between the Uncanoonuc Mountains. During periods of drouth water is sometimes pumped from a small pond about one half a mile below the reservoirs and on the same brook.

Examination of Water from Goffstown Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10,904	1913 April 13	Slight	Sl. fibre	V. slight	0.10	.0026	.0050	.0025	.0000	.13	0.3	...	...	0	....
11,521	Aug. 28	Sl. fine	V. slight	Sl. arom.	0.45	.0014	.0040	.0050	.0000	.13	0.7	....	....	0	....
12,024	1914 April 19	V. slight	Mod. fine	Earthy	0.03	.0028	.0050	.0060	.0000	.16	0.3	....	....	0	0

Water from Barnard Pond (Pumped to Precinct Supply Reservoir at this date.)

11,594	1913 Sept. 16	Consid.	Consid. floe.	Faint. veg.	.50	.0010	.0340	.003	.0000	.20	.7050	0	0
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Driven Well of Kendall, Hadley & Company.

11,515	1913 Aug. 28	None	None	None	0.05	.0010	.0010	.2000	.0000	1.50	3.9	0
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Gorham.—The town system, derived from a stream, supplies about three hundred families. An earlier system, the Alpine Aqueduct Company, furnishes one hundred and sixty services from a series of seventeen springs.

Examination of Water from Town System.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10,924	1913 April 21	None	None	None	0.15	.0006	.0040	.0025	.0000	.04	0.1	....	....	0	....
12,021	1914 April 16	None	None	None	0.12	.0008	.0034	.0050	.0000	.04	0.1	....	....	0	0

Greenville.—The artesian well supply is of inferior quality and limited as to quantity. During the past two years the town has been investigating the matter of a regular public system and is now planning to install a supply from Pratt Pond. (See special reports elsewhere.

Examination of Water from Town Well.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c.	10 c.
10901	1914 April 14	Slight	Mod. fine floc.	Dist. earthy	0.35	.0010	.0075	.0100	High	.25	3.9	....	Much	0	....

Examination of Water from Proposed Sources of Public Supply.

10967	1913 April 28	None	Sl. fine	Ft. earth	0.03	.0006	.0010	.0200	.0000	.35	1.2	....	....	0	1
10968	April 28	None	Sl. floc.	None	0.03	.0006	.0016	.0050	.0000	.07	0.7	....	.005	0	2
11060	May 26	Heavy	Consid. earth	Mark. veg.	0.35	.0020	.0034	.0050	Tr.	.08	1.1	....	.025	0	3 ⁶
11061	May 28	Mod. opal	Mod. ferrug.	Sl. earth	0.60	.0026	.0020	.0100	.0000	.08	1.2	....	.100	0	4
11122	June 15	Consid. opal	Mod. fine	Ft. earth	0.10	.0020	.0020	.0050	.0000	.08	0.7	....	.075	0	3
11123	June 15	Consid. opal	Mod. fine	None	0.35	.0014	.0010	.0050	.0000	.09	0.9	....	.150	0	4
11180	June 22	Slight	Mod. floc.	None	0.05	.0006	.0010	.0050	.0000	.08	0.6	....	.007	0	5
11597	Sept. 5	V. slight	Sl. fine earth	Arom.	0.15	.0020	.0024	.0150	Ft. tr.	.15	1.5	....	.030	0	6
11598	Sept. 15	Consid. opal	Heavy clay	Sl. earth	0.20	.0008	.0056	.0200	Ft. tr.	.56	1.6	....	.035	—	7
11788	Nov. 25	Sl. opal	Mod. earth	Ft. earth	0.03	.0008	.0018	.0050	.0000	.10	1.2	....	....	0	5
11875	1914 Feb. 2	Sl. opal	Slight	None	0.05	.0003	.0014	.0050	.0000	.10	1.1	....	....	0	+ ⁵
12129	May 18	Slight	Sl. floc.	Sl. swamp	0.35	.0010	.0090	.0040	.0000	.16	0.1	...	....	0	+ ⁸
12130	May 18	Sl. fine	Sl. floc.	V. slight	0.10	.0012	.0100	.0030	.0000	.09	0.1	....	....	0	+ ⁹

¹Spring by Railroad Station.

²Sawtelle spring.

³Test well, 31 ft. deep.

⁴Test well, 23 ft. deep.

⁵Boiling spring.

⁶Test well.

⁷Test well.

⁸Ashley's pond, New Ipswich.

⁹Pratt pond, Smithville.

Examination of Water from Spring of James Rafuse.

10859	1913 May 30	None	None	None	0.05	.0010	.0040	.3000	Tr.	2.20	4.6	—
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Hampton.—The original source of the Hampton Water Works Company, supplying Hampton Beach Village Precinct, was a series of driven wells. During the summer season of 1913 this supply became inadequate, and the construction of two large dug wells not relieving the situation, it was found necessary to supplement the main source by water from a brook. The latter was continued for two or three weeks, following the approval of the State Board of Health on condition that hypochlorite be used. While the well water supply is normally good, the shortage during 1913 provoked an abnormal draft upon this source, resulting in considerable impairment of quality and leading to numerous complaints.

During 1914 the new Marston spring system was completed, such affording an adequate supply of excellent character for the villages of Hampton Beach, Little Boar's Head, Rye Beach and North Hampton. (See special reports elsewhere.)

Examination of Water from Supply of Hampton Water Works Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
	1913														
10909	April 14	V. slight	None	None	0.00	.0014	.0020	.0200	.0000	1.65	2.6	.....	.....	0	....
11394	Aug. 8	Consid. white	V. fine	V. slight	0.15	.0010	.0036	.0100	.0000	1.40	3.7	.....	.....	+	..
11395	Aug. 8	Sl. fine	V. slight	None	0.10	.0010	.0030	.0100	.0000	1.38	3.2	.....	.....	+	....
11429	Aug. 13	None	None	None	0.05	.0010	.0034	.0100	.0000	1.25	3.3	.....	.....	0	....
11431	Aug. 12	None	Sl. earth	Sl. marsh	0.05	.0010	.0030	.0100	.0000	1.20	4.0	.....	.....	+	....
11432	Aug. 12	V. slight	Sl. earth	Earth	0.07	.0010	.0035	.0100	.0000	1.30	3.9	.....	.....	+	....
11433	Aug. 13	None	None	None	0.05	.0010	.0030	.0100	.0000	1.15	3.3	.....	.....	0	....
11434	Aug. 13	Consid.	Consid. ferrug.	Mark. earth	0.35	.0010	.0040	.0100	.0000	1.35	3.9	.....	.....	0	....
	1914														
11971	Mar. 24	None	None	None	0.05	.0010	.0016	.0300	.0000	1.30	3.2	.....	.....	0	0
12074	May 15	None	No e	None	0.02	.0006	.0010	.0300	.0000	1.20	2.9	.....	.....	0	0
12399	July 21	None	None	None	0.05	.0006	.0010	.0400	.0000	1.30	3.5	.....	.....	0	0
12400	July 21	Mod.	Mod. fine floc.	Sl. earth	0.23	.0016	.0086	.0300	.0000	1.30	3.1	.....	.....	0	0
12495	Aug. 17	None	Sl. earthy	None	0.00	.0003	.0006	.0800	.0000	1.50	3.3	.....	.....	0	0
12496	Aug. 17	None	V. slight	None	0.00	.0002	.0004	.0600	.0000	1.50	3.2	.....	.....	0	0

**Bacteriological Examination of Water of Hampton Water Works.*

Date of collection	Source	Bacteria per c. c.		Colon Bacilli	
		Agar 37°	Agar Gelatin 20°	1 c. c.	10 c. c.
1913					
Aug. 11	Brook intake.....	Many	.....	+	+
Aug. 11	Roadway on brook.....	Many	.....	+	+
Aug. 11	Station tap.....	6000	.....	+	+
Aug. 11	Well (storage for brook water).....	6000	.....	+	+
Aug. 14	Tap in station (driven well only).....	147	.....	0	0
Aug. 14	Short brook.....	278	.....	0	+
Aug. 14	Tap in station (Long brook water)	11528	.....	+	+
Aug. 21	Intake at brook.....	7900	.....	+	.....
Aug. 21	Tap at pumping station.....	48	.....	0	.....
Aug. 21	Well containing brook water.....	9000	.....	0	.....
Aug. 21	Tap at pumping station.....	51	.....	0	¹
Aug. 27	Intake at brook.....	6500	34000	+	.....
Aug. 27	Tap at station (brook water).....	33	600	0	¹
Aug. 27	Well (contains brook water).....	7000	40000	0	.....
Aug. 27	Tap at station.....	40	750	.....	¹

*The period of use of hypochlorite was short, and at that time the Board not having adopted the policy of keeping constantly on hand an emergency equipment, the one here employed was very crude. The colon results and relatively high counts at 37° are undoubtedly referable to farm drainage entering the brook, the inspection showing no evidence of house sewage.

¹Treated water.

Hancock.—The town supply is derived from an impounded brook, the storage of 2,000,000 gallons thus afforded supplying 75 per cent of the population by gravity.

Examination of Water from Town Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10922	1913 Apr. 18	None	None	None	0.15	.0010	.0054	.0050	.0000	.12	0.8	.....	.....	0	.....
12031	1914 Apr. 20	V. sl. opal	None	Sl. earth	0.15	.0006	.0054	.0030	.0000	.06	0.4	.....	.....	0	0

Hanover.—The Hanover Water Works consists of a gravity system from an impounded brook.

Examination of Water from Supply of Hanover Water Works.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10,927	1913 April 21	V. slight	Sl. earth	Sl. earth	0.35	.0030	.0130	.0050	.0000	.08	1.2	1.2	0.00	0	....
10,928	April 21	Slight	Mod. floc.	Sl. arom.	0.40	.0070	.0170	.0050	.0000	.08	0.6	0.6	....	0	....
12,155	1914 May 25	Slight	Sl. veg.	Arom.	0.25	.0014	.0158	.0030	.0000	.07	0.9	0.9	...	0	0

Haverhill.—A limited supply is furnished to certain residents of Haverhill precinct from a spring, the water being conveyed through lead pipe. Plans for the installation of a precinct system have been adopted,—for a description of which see elsewhere.

The supply of Woodsville precinct, from the Ammonoosuc River, has recently been shorn of its one-time highly dangerous character through the installation (September, 1914) of a system of chlorination. Reference to the latter appears elsewhere in this report.

Examination of Water from Supply of Haverhill Aqueduct Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10930	1913 Apr. 28	V. slight	V. slight	Sl. earth	0.05	.0006	.0010	.0025	.0000	.09	1.5	.075	....	0	....
12048	1914 Apr. 24	Sl. opal	None	Sl. Earth	0.05	.0010	.0064	.0030	.0000	.05	1.2	.050	....	0	0

Examination of Water from Supply of Woodsville Aqueduct Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,030	1913 May 21	V. slight	Sl. floe.	Sl. earth	0.35	.0010	.0066	.0050	.0000	.05	2.0	....	....	0	....
11,141	June 17	Very slight	Slight	Sl. earthy	0.35	.0006	.0050	.020	.0000	.05	0.1	....	....	0	....
11,338	Aug. 4	V. faint	Mod. es. floe.	Sl. swamp	0.35	.0020	.0110	.0100	.0070	.11	1.5	....	....	+	....
12,269	1914 June 24	V. sl. opal	Sl. br. floe.	None	0.15	.0006	.0072	.0030	.0000	.11	1.2	....	....	+	+
12,271	June 24	None	Mod. floe.	None	0.00	.0010	.0018	.0030	.0000	.24	2.2	.050	....	+	+¹
12,426	July 29	None	Con. earth	None	0.00	.0006	.0014	.0050	.0000	.28	2.6	.030	....	0	0 ¹

¹ From public standpipe, spring water source.

Examination of Water from Springs. Proposed Source of Public Supply for Haverhill Precinct.

11444	1913 Aug. 15	V. Slight	Slight	Earthy	0.05	.0020	.0060	.0750	.0000	.30	6.9	....	....	+	...¹
11451	Aug. 19	Sl. earthy	Sl. earthy	Sl. earthy	0.03	.0054	.0058	.1250	.0000	.25	7.1	....	....	0	... ²
11463	Aug. 21	None	None	None	0.00	.0012	.0016	.0040	.0000	.14	6.0	....	....	0	... ³
11464	Aug. 21	None	Sl. floe	None	0.00	.0004	.0012	.0020	.0000	.11	5.3	....	....	0	... ³

¹ Roadside spring. ² From ravine, above source of No. 11,444
³ Morris farm spring

Examination of Water from Supply of Lake Tarleton Club.

12323	1914 July 6	V. slight	V. slight	Sl. earth	0.03	.0006	.0028	.4000	Ft. trac	1.80	4.9	....	....	0	+ ¹
12324	July 6	V. slight	V. slight	Sl. marsh	0.12	.0024	.0094	.0050	.0000	.03	0.6	....	....	0	+ ²

¹ From well. ² From lake

Examination of Water from Reservoir Supplying Grafton County Farm.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10772	1913 Feb. 20	Slight	Sl. earth	.....	0.35	.0040	.0065	.0025	.0000	.10	2.4	.....	.....	0	.....

Examination of Ice Supplied to Boston & Maine Railroad (N. J. Miller).

12011	1914 Apr. 13	V. sl. opal	V. sl. floc.	V. sl. musty	0.00	.0006	.0008	.0025	.0000	.04	0.0	0	0
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Examination of Ice as Sold in Woodsville.

10831	1913 Mar. 18	Slight	Mod. floc.	V. faint	0.05	.0010	.0030	.0025	.0000	.05	0.0	0
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Henniker.—During 1914, the Henniker Spring Water Company's system was acquired by the town and greatly extended. (See special report elsewhere.)

Examination of Water from Henniker Spring Water Company's System.

10932	1913 April 21	Slight	Sl. floc.	None	0.00	.0006	.0010	.0025	.0000	.10	0.9	.....	.....	0	.....
11749	Nov. 10	Ft. opal	None	Ft. swamp	0.10	.0008	.0050	.0025	.0000	.08	1.4	.....	.....	0	+
11915	1914 Feb. 22	None	V. slight	None	0.03	.0014	.0018	.0050	.0000	.08	3.2	.....	.005	0	0
12057	April 30	V. sl. opal	None	None	0.02	.0008	.0020	.0100	.0000	.07	0.7	.....	.....	0	0

Examination of Water from Sources under Consideration for Public Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11730	1913 Nov. 5	V. slight	Sl. veg.	Fishy	0.40	.0006	.0214	.0020	.0000	.11	0.6	....	....	....	1
11731	Nov. 5	V. slight	Sl. veg.	Fishy	0.35	.0008	.0180	.0020	.0000	.11	0.6	....	....	....	2
11732	Nov. 5	V. slight	Sl. veg.	Fishy	0.40	.0006	.0255	.0020	.0000	.12	0.5	....	....	0	3
12229	1914 June 11	Mod. opal	Mod. earth	Dist. earth.	0.07	.0006	.0014	.0030	.0000	.14	1.1	....	.125	0	4
12230	June 11	None	Sl. br'n floe.	Sl. swamp	0.30	.0006	.0044	.0030	.0000	.07	0.1	....	.002	+	5

¹ Brook flowing from Crany Hill pond. ² Crany Hill pond, west shore.

³ Crany Hill pond, east shore. ⁴ Test well in Garland land.

⁵ Stream from springs near test well.

Hill.—The Hill Water Works, a gravity system, has its source in a spring and stream, water from the latter being permitted to seep through sandy soil into a collecting well. In 1912 the number of services was fifty-seven, hydrants, six; mains, cement-lined.

Examination of Water from Supply of Hill Water Works.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10991	1913 May 8	Mod-erate	Mod. gelot.	None	0.35	.0010	.0090	.0050	.0000	.13	0.1	....	....	0	....
12156	1914 May 25	Slight	Slight	V. slight	0.28	.0006	.0074	.0030	.0000	.15	1.2	....	....	0	0

Hillsborough.—Hillsborough Bridge precinct has a public system from a pond of five hundred acres; distribution by gravity from a reservoir of 500,000 gallons. Mains partially cement-lined.

Examination of Water from Supply of Hillsborough Bridge Precinct System.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10914	1913 April 17	Slight	V. slight	Slight	0.25	.0010	.0080	.0025	.0000	.08	0.1	....	....	0	....
11640	Oct. 20	None	None	Sl. marsh	0.10	.0010	.0164	.0050	.0000	.09	0.1	....	....	0	....
12040	1914 April 24	Ft.	None	None	0.20	.0006	.0086	.0030	.0000	.08	0.1	....	....	0	0

Hooksett.*Examination of Water from Well Supplying Union School District.*

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11632	1913 Sept. 26	None	V. slight	Sl. foul	0.05	.0010	.0010	.0500	.0000	.68	2.4	....	....	+	....
11635	Sept. 29	None	V. slight	Sl. earth	0.05	.0010	.0014	.0500	.0000	.70	2.4	....	....	+	....

Hopkinton.—Contoocook precinct is supplied by a gravity system from Bear Pond.

Examination of Water from Contoocook Village Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10916	1913 Apr. 17	V. slight	None	None	0.10	.0010	.0070	.0050	.0000	.14	0.1	....	....	0	....
12049	1914 Apr. 27	V. slight	V. slight	Sl. earth	0.05	.0010	.0064	.0030	.0000	.12	0.3	....	....	0	0

Examination of Water from Well of Davis Paper Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c.c.	10 c.c.
10637	1912 Nov. 25	None	V. slight	Ft. earth	0.00	High	.0020	.0100	High	.25	3.9	....	...	0	....
11131	1913 June 11	Slight	Sl. white	Sl. foul	0.05	.0010	.0020	.0500	High	.15	2.6	...	...	0	....

Examination of Water from Well Supplying Roberts Cottage.

11305	1913 July 25	Mod. opal	Sl. brown floe.	Sl. foul	0.20	.0040	.0050	.1500	Tr.	.70	2.0	0
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Examination of Water from Well of Amos F. Frye Supplying Great Elm Farm.

11307	1913 July 25	None	Sl. brown floe.	None	0.05	.0006	.0010	.0050	.0000	.60	3.9	0
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Hudson.—The Hudson Water Works system consists of two large dug wells, supplemented during 1913 by a series of driven wells. The well water is of good quality as a whole. The objectionable Ottarnic Pond auxiliary source has been discontinued. (See special report elsewhere.)

Examination of Water from Supply of Hudson Water Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10450	1912 Sept. 3	V. slight	V. slight	None	0.03	.0010	.0015	.0200	.0000	.27	1.4	....	....	0	....
10527	Oct. 2	V. slight	Sl. flocc.	Ft. earthy	0.05	.0005	.0010	.0100	.0000	.38	1.2	....	....	0	....
10528	Oct. 2	V. slight	Sl. earthy	Ft. earthy	0.00	.0020	.0010	.0200	.0000	.80	3.6	....	....	0	....
10713	1913 Jan. 16	None	V. slight	None	0.05	.0006	.0022	.0050	.0000	.30	1.9	....	....	0	....
10714	Jan. 16	V. faint	None	Mark veg.	0.00	.0366	.0024	.0050	.0000	.35	3.2	....	..	0	....
10835	Mar. 27	V. slight	V. slight	None	0.07	.0014	.0010	.0050	.0000	.28	0.9	....	....	0	....
10836	Mar. 27	V. slight	V. slight	None	0.05	.0010	.0010	.0050	.0000	.34	1.4	....	....	0	....
10837	Mar. 27	V. slight	V. slight	None	0.07	.0006	.0010	.0025	.0000	.32	1.4	....	....	0	....
10872	Apr. 8	V. slight	V. sl. flocc.	Sl. earth	0.05	.0010	.0036	.6050	.0000	.27	1.5	....	.015	0	...
10873	Apr. 8	V. slight	Sl. gray flocc.	Sl. earth	0.05	.0010	.0040	.0050	.0000	.35	1.4	....	.025	0	....
10874	Apr. 8	Slight	V. sl. flocc.	Dist. earth	0.05	.0010	.0030	.0050	.0000	.36	1.8	....	.000	0	....
10920	1914 Feb. 25	None	None	Sl. earth	0.05	.0010	.0014	.0100	.0000	30	1.6	....	.001	0	0
12050	Apr. 27	None	None	None	0.02	.0008	.0020	.0100	.0000	.23	1.4	....	.005	0	0

Examination of Water from Well Supplying Hudson School District.

11844	1913 Dec. 30	Sl. opal	Mod. flocc.	Sl. musty	0.10	.0010	.0064	.0300	Tr.	.90	7.4	+
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Jackson.

Examination of Water from Spring Supplying Wentworth Hall.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10502	1912 Sept. 23	None	None	None	0.00	.0005	.0005	.0025	.0000	.05	1.8	....	....	0	....

Examination of Water from Spring Supplying School District.

Number.	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11048	1912 May 22	Heavy	Heavy earthy	Earthy	0.70	.0020	.0130	.0200	High	.10	1.9	.....	.....	0	
11568	Sept. 8	Heavy opal	Heavy earthy	None	0.10	.0044	.0065	.0080	.0000	.04	1.4	.....	.....	+	¹

¹New well just completed.

Jaffrey.—The town system consists of a gravity supply from Bullet Pond, located in Rindge.

Examination of Water from Bullet Pond Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10746	1913 Feb. 10	None	None	Mark. veg.	....	.0010	.0110	.0050	.0000	.15	0.3	.....	.....	0	....
12030	1914 Apr. 23	Sl. opal	V. si. flocc.	Sl. veg.	....	.0038	.0118	.0050	.0000	.12	0.1	.....	.....	0	....

Jefferson.

Examination of Water Supplying Boston & Maine Railroad, Trains and Stations.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11150	1913 June 18	V. slight	Sl. floc.	Sl. arom.	0.35	.0006	.0050	.0050	.0000	.05	0.1	...	...	+	1
11201	July 1	None	None	Earthy	0.10	.0006	.0010	.0350	.0000	.10	1.6	...	...	0	2
11217	July 8	None	Sl. fine	Marked musty	0.15	.0006	.0038	.0050	.0000	.05	0.4	...	...	+	1
12264	1914 June 19	None	Sl. brown floc.	Sl. musty	0.15	.0010	.0030	.0060	.0000	.05	0.7	...	...	0	0 ³
12298	June 29	None	V. sl. floc.	None	0.10	.0008	.0020	.0030	.0000	.05	0.7	.010	...	0	0 ²

¹Stream—Meadows station.²Spring—Jefferson station.³Stream—Cherry mountain station.*Examination of Ice Supplying Boston & Maine Railroad (Cherry Mountain).*

12281	1914 June 25	V. slight	None	Sl. earth	0.00	.0010	.0014	.0030	.0000	.04	0.0	0	...
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• **Keene.**—The city supply is derived from two ponds.

Examination of Water from Keene Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10926	1913 Jan. 24	V. slight	Sl. veg.	Sl. musty	0.15	.0006	.0030	.0050	.0000	.15	0.3	.020	....	0	....
11025	May 17	V. slight	V. slight	Dist. earth	0.15	.0034	.0110	.0050	.0000	.12	0.2	....	....	0	....
11059	May 25	None	V. slight	V. slight	0.20	.0010	.0150	.0050	.0000	.08	1.9	....	....	0	....
11082	June 1	V. slight	Mod. flocc.	Sl. earth	0.35	.0040	.0100	.0025	.0000	.09	0.1	....	....	0	....
12051	1914 April 27	Slight	Mod. flocc.	None	0.25	.0006	.0094	.0030	.0000	.08	0.3	....	.050	0	+
12020	May 4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	+	+
12121	May 4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	+
12122	May 4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	+
12123	May 4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	+	+
12150	May 22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0
12151	May 22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0
12152	May 22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0

Examination of Water from Spring of Keene Development Co.

12115	1914 June 8	V. Slight	Consid. gray flocc.	Oily	0.03	.0020	.0022	.0030	.0000	.30	3.6	0
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Laconia.—The source of the Laconia Water Company's supply is Lake Paugus, the water being pumped to a reservoir of 2,700,000 gallons, following treatment by calcium hypochlorite, the latter having been adopted during 1912. Mains in part of cement-lined pipe, with cement-lined services. (See special discussion of chlorination with reference to Lakeport plant elsewhere.)

Examination of Water from Supply of Laconia Water Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c.c.	10 c.c.
10656	1912 Dec. 4	Slight	Sl. earth	Earth arom.	0.05	.0010	.0050	.0050	.0000	.12	0.6	....	....	0	....
10657	Dec. 4	V. slight	None	V. sl. earth	0.00	.0010	.0040	.0050	.0000	.13	0.6	...	....	0	....
10755	1913 Feb. 13	V. sl. opal	V. slight	None	0.07	.0010	.0060	.0050	.0000	.12	0.6	....	....	0	....
10756	Feb. 13	None	None	None	0.00	.0010	.0050	.0025	.0000	.13	0.4	....	....	0	....
10913	April 17	V. slight	None	None	0.07	.0010	.0060	.0050	.0000	.17	0.4	...	....	0	...
11892	1914 Feb. 4	None	None	None	0.10	.0008	.0090	.0050	.0000	.13	1.2	....	....	0	0
11893	Feb. 4	None	V. slight	None	1.10	.0006	.0088	.0050	.0000	.12	0.9	....	....	0	0
12028	April 22	V. sl. opal	None	None	0.02	.0008	.0080	.0040	.0000	.13	0.4	....	....	0	0

Examination of Water from Saltmarsh Pond.

10475	1912 Sept. 13	V. slight	V. slight	Ft. marsh	0.05	.0024	.0114	.0020	.0000	.12	1.4	0
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Examination of Water from Spring of Fred Hoyt, known as Laconia Spring.

12214	1914 June 12	None	None	None	0.00	.0006	.0006	.0030	.0000	.07	1.2	0	0
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Bacteriological Examination of Laconia Supply.

The water of Lake Paugus is normally very clean chemically, the organic content being quite low. However, on account of the Weirs sewage discharge at the channel entering this lake, chlorination was found necessary. Notwithstanding the highly satisfactory character of this water from a chemical standpoint, the bacteriological examinations recorded below indicate that at times at least, the bacterial population is very large. It is interesting

to note the effectiveness of a small dose of hypochlorite under these conditions, it being apparent (a) that in the absence of organic matter, the bacterial destruction by even minute amounts of this chemical is very extensive; (b) that the forms first killed off are the varieties growing at body temperature, i. e., those typical of sewage and therefore the ones whose death is most essential.

During the past two years the amount of hypochlorite employed at Lakeport has been equivalent to but about one tenth part chlorine per million—an effective amount the smallness of which thus far seems to be without precedent. While it is true that the residual numbers of ordinary water bacteria is in a number of cases larger than the usual practice recognizes, yet in every instance the destruction of those of the colon type is satisfactorily complete. Nevertheless, it will possibly we well, in the future, to increase the dosage slightly.

During the past two years the scientific supervision of this plant has been under the direct control of the chemist of the board.

Bacteriological Examination of Laconia Supply.

Number	Date of Collection	Source	Bacteria per c.c.		Colon Bacilli	
			Agar (37°C)	Agar-Gelatin (20°C)	1 c.c.	10 c.c.
.....	1913 July 11	Tap, Union Ave.....	56	67	0	....
.....	July 11	Tap, Pumping Station.....	59	66	0	....
.....	July 11	Lake Paugus (raw water).....	.....	2,244	+	....
.....	July 22	Lake Paugus (raw water)	660	12,177	0	....
.....	July 22	Tap, Pumping Station.....	43	897	0	....
.....	July 22	Tap, Clinton Street.....	11	26	0	....
.....	July 22	Tap, Union Ave.....	36	274	0	....
11361	July 29	Lake Paugus (raw water)....	4 500	58,500	0	0
11362	July 29	Tap, 980 Union Ave.....	32	650	0	0
11363	July 29	Tap, 435 Union Ave.....	91	750	0	0
11364	July 29	Tap, 766 Union Ave.....	.....	.....	0	0
11396	Aug. 7	Lake Paugus (raw water).....	4,000	6,600	+	+
11397	Aug. 7	Tap, Main Street.....	75	200	0	+
11398	Aug. 7	Tap, Union Ave.....	30	450	0	0
11399	Aug. 7	Tap, High Street... ..	100	200	0	0
11478	Aug. 20	Lake Paugus (raw water).....	5,400	59,000	+	....
11479	Aug. 20	Tap, Union Ave.....	40	760	0	....
11480	Aug. 20	Tap, Fair Street.....	130	825	0	....
11481	Aug. 20	Tap, Pumping Station.....	25	500	0	....
11525	Aug. 27	Lake Paugus (raw water).....	53,500	56,000	0	....
11526	Aug. 27	Tap, Pumping Station.....	28	450	0	....
1527	Aug. 27	Tap, Union Ave.....	37	600	0	....
1	Aug. 27	Tap, Bayside Court.....	140	700	0	...

Number	Date of collection	Source	Bacteria per c.c.		Colon Bacilli	
			Agar (37°c)	Agar-Gelatin (20°c)	1 c.c.	10 c.c.
.....	1913 Sept.	3 Lake Paugus (raw water).....	15,000	28,000	+	....
.....	Sept.	3 Tap, Elm Street.....	9	245	0	....
.....	Sept.	3 Tap, Union Ave.....	18	450	0	....
.....	Sept.	3 Tap, Water Street.....	27	600	0	....
.....	Sept.	9 Lake Paugus (raw water).....	800	3,200	+	...
.....	Sept.	9 Tap, Pumping Station.....	4	24	0	....
.....	Sept.	9 Tap, Fall Street.....	29	115	0	...
.....	Sept.	9 Tap, 980 Union Avenue.....	29	90	0	...
.....	Sept.	17 Lake Paugus (raw water).....	820	3,000	0	....
.....	Sept.	17 Tap, Gilford Ave.....	34	164	0	...
.....	Sept.	17 Tap, Union Ave.....	45	80	0	....
.....	Sept.	17 Tap, Elm Street.....	8	190	0	....
.....	Sept.	25 Lake Paugus (raw water)	850	30,000	0	...
.....	Sept.	25 Tap, Union Ave.....	11	92	0	....
.....	1914 March	9 Tap, Union Ave	4	100	0	0
.....	March	9 Lake Paugus (raw water).....	400	900	....	+
.....	March	9 Tap, Water Street.....	6	55	0	0

Lancaster.—The precinct supply is derived from a mountain stream piped to a distributing reservoir of 2,000,000 gallons. (See special report elsewhere.)

Examination of Water Supply of Lancaster.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10920	1913 Apr. 19	None	None	V. sl. earth	0.07	.0006	.0030	.0050	.0000	.07	0.1	.....	.....	0	....
11912	1914 Feb. 20	+	+* [†]
11917	1914 Feb. 24	V. slight	Sl. floe.	Sl. earth	0.23	.002	.0046	.0100	.0000	.07	0.9	.....	.....	+	+
12029	Apr. 22	V. slight	V. slight	V. slight	0.15	.0006	.0054	.0030	.0000	.05	0.1	.....	.....	0	....

*Mill Pond on Israel River. [†]Also shows colon bacilli in 0.1 c. c.

Examination of Ice Supplied Boston & Maine Railroad.

10325	1913 Mar. 24	V. slight	Sl. cotton fibre	None	0.00	.0010	.0010	.0025	.0000	.03	0.0	.....	.....	0	....
12241	1914 June 17	V. sl. opal	Sl. floe.	None	0.00	.0006	.0020	.0030	.0000	.06	0.0	.....	.....	0	....

Lebanon.— The precinct system consists of water from the Mascoma River, purified by mechanical filtration with alum.

Examination of Water from the Lebanon Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10890	1913 Apr. 9	Sl. opal	V. sl. fine	Earthy	0.25	.0014	.0100	.0025	.0000	.15	1.2	0	.....	0	....
10915	Apr. 17	Slight	None	None	0.15	.0010	.0070	.0050	.0000	.12	1.5	.....	.....	0	....
11719	Oct. 27	None	None	None	0.03	.0018	.0072	.0030	.0000	.12	1.9	.....	.....	0	....
11720	Oct. 27	None	None	None	0.02	.0010	.0076	.0050	.0000	.12	1.9	.....	.....	0	....
12032	1914 Apr. 23	Mod. opal	Sl. ferrug.	V. slight	0.15	.0006	.0064	.0030	.0000	.10	1.6	.....	Tr.	0	....

West Lebanon is supplied with water of good quality by the Hartford Water Company, White River Junction, Vt. During 1913 the Vermont source became inadequate and it was necessary to resort to pumping on the New Hampshire side from the Connecticut River, and from a spring.

Examination of Water Supplied West Lebanon by Hartford Water Company, White River Junction, Vt.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11445	1913 Aug. 18	V. slight	Sl. coarse floe.	Sl. earth	0.45	.0026	.0110	.0025	.0000	.05	4.0	....	....	+	¹
11447	Aug. 18	None	Sl. coarse veg.	Foul	0.20	.0030	.0030	.0100	.0000	.38	5.6	....	....	0	³
11744	Nov. 11	Consid.	Mod. gray floe.	Earth veg.	0.35	.0010	.0120	.0025	.0000	.08	2.4	....	....	+	+¹
11745	Nov. 11	Mod. opal	V. slight	Sl. earth veg.	0.32	.0008	.0130	.0025	.0000	.10	3.2	..	...	+	+²
11746	Nov. 11	Mod. opal	Sl. fine floe.	Sl. veg	0.25	.0026	.0140	.0050	.0000	.23	3.5	....	....	+	+²
11747	Nov. 11	Consid.	Consid. bro. floe.	None	0.25	.0222	.0120	.0025	.0000	.20	3.6	....	....	+	+²
11789	Nov. 25	Slight	Sl. coarse	Earthy	0.40	.0010	.0124	.0025	.0000	.10	2.3	....	....	+	+¹
11790	Nov. 25	Sl. opal	Sl. floe.	Earthy	0.08	.0008	.0080	.0025	.0000	.20	3.6	....	....	0	²
11791	Nov. 25	V. ft. opal	V. slight	Ft. earthy	0.05	.0008	.0074	.0025	.0000	.10	3.2	....	....	0	²

¹ Intake at river.
² River and spring water (filtered).
³ Spring water.

Results of Bacteriological Examination of Connecticut River Water and Water from a Spring as Supplied to West Lebanon.

The following examinations are of samples collected at various points in connection with the use of water from the Connecticut River and from a spring. At the commencement of use of river water instructions were given for the application of hypochlorite treatment. The earlier results however, as indicated by bacteriological examinations, were not satisfactory, and a visit to the plant by the chemist on November 29th revealed the fact

that neither the filtration nor the chlorination was being applied properly. Not only were the two mechanical filters in use (pressure type) found to be entirely too small for the service exacted of them, but there was no provision whatever for subsidence following coagulation. Under the circumstances, so far as the filtration was concerned, any satisfactory degree of improvement of the water was out of the question. Although crudely applied the sterilization treatment was, however, adjusted so as to afford acceptable results, bacterially at least,—it being represented that resort to the river source would hardly be necessary for more than a very few days longer at most.

During the fall of 1914, however, it again became necessary to supplement the regular supply from the river. At this time, the hypochlorite equipment was improved and instructions given to install a settling basin. Meanwhile, plans have been made which, it is expected, will insure a more satisfactory auxiliary source by another season. In the future, any practice of resorting to the river source at times of shortage will not be tolerated, with the present filter equipment. (See special reports elsewhere.)

Lebanon.

Bacteriological Examinations of Connecticut River Water.

Date of Collection	Source	Bacteria per c. c.		Colon Bacilli	
		Agar 37 deg.	Agar-Gelatin (20 deg.c.)	1 c. c.	10 c. c.
Nov. 17	Tap in village.....	3	125	0	0
Nov. 17	Filtered and treated water.....	10	1100	0	0
Nov. 17	Filtered only.....	8000	21000	+	+
Nov. 17	Intake at river.....	10000	25000	+	+
Nov. 24	Tap in village.....	100	4000	0	0
Nov. 24	Treated and filtered water.....	18	4280	0	0
Nov. 24	Filtered only..	5000	310200	0	+
Nov. 24	Intake at river.....	25000	V. high	+	+
Dec. 1	Tap in village	10	204	0	+
Dec. 1	Filtered and treated water.....	12	300	0	+
Dec. 1	Filtered only.....	.....	10000	0	+
Dec. 1	Intake at river.....	30000	64000	+	+
Dec. 9	Tap in village.....	3	93	0	0
Dec. 9	Filtered and treated water.....	4	20	0	0
Dec. 9	Filtered only.....	924	2300	+	+
Dec. 9	Intake at river	1000	3200	+	+
Dec. 15	Tap in village	103	3300	0	0
Dec. 15	Filtered and treated water.....	40	1200	0	0
Dec. 22	Tap in village	18	350	0	0
Dec. 22	Filtered and treated water.....	30	1430	0	0
Dec. 30	Tap in village	18	.....	0	0

Lincoln.—J. E. Henry & Sons Company furnish water from a stream.

Examination of Water from Henry Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10941	1913 Apr. 23	Slight	Sl. brown floc.	V. sl. marsh	0.10	.0010	.0016	.0050	.0000	.05	0.3	....	....	0	....
12052	1914 Apr. 27	None	Sl. floc.	None	0.13	.0006	.0040	.0030	.0000	.05	0.1	....	....	0	0

Lisbon.

Examination of Water from the Lisbon Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10934	1913 Apr. 22	Sl. opal	None	V. sl. foul	0.15	.0010	.0062	.0100	.0000	.07	1.9	....	....	0	....
12004	1914 Apr. 15	Sl. opal	Sl. earth	Sl. earth	0.08	.0008	.0060	.0050	.0000	.06	1.1	....	....	0	0
12005	Apr. 15	V. slight	V. slight	Ft. swampy	0.10	.0008	.0058	.0050	.0000	.05	1.1	....	....	0	0
12538	Aug. 29	Heavy opal	Consid. earth	Ft. mouldy	0.25	.0008	.0170	.0020	.0000	.08	2.2	....	....	0	0

Examination of Water from *Springs of Merrill & Sanborn Supplying Hotel Lookoff, Sugar Hill.

11420	1913 Aug. 13	None	None	Sl. foul	0.00	.0006	.0010	.0050	.0000	.08	1.4	....	....	+	....
11675	Oct. 15	None	None	None	0.0	.0006	.0014	.0100	.0000	.37	1.9	....	....	0	....
11910	1914 Feb. 17	None	None	None	0.03	.0006	.0010	.0050	.0000	.60	1.9	....	....	0	....
12378	July 16	None	None	None	0.00	.0006	.0014	.0030	.0000	.07	2.7	....	....	0	....

*Two different sources, undesignated.

Littleton.—The town system is from the north branch of Gale River, conveyed a distance of nineteen miles through a conduit varying from sixteen to ten inches in diameter. There are two distributing reservoirs of 1,000,000 and 500,000 gallons respectively.

Examination of Water from the Littleton Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10923	1913 Apr. 18	None	V. slight	None	0.07	.0010	.0020	.0025	.0000	.03	0.1	.010	....	0	....
11501	Sept. 27	None	None	None	0.03	.0010	.0020	.0050	.0000	.05	0.1	....	....	0	....
12067	1914 May 1	None	V. slight	None	0.18	.0006	.0028	.0059	.0000	.04	0.1	.010	....	0	0

Examination of Ice Supply of Town of Littleton.

10452	1912 Sept. 3	V. slight	V. sl. coarse	Sl. earth	0.15	.0010	.0010	.0050	.0000	.03	2.3	....	....	+	1
11043	1913 May 21	Ft. opal	V. slight	Si. arom.	0.03	.0010	.0010	.0050	.0009	.05	0.0	....	....	0	2

¹Water from small pond fed by brook, on the banks of which hogs are pastured.

²Ice, cut therefrom.

Londonderry.

Examination of Water from Spring of W. P. Mack Supplying Glenwood Farm.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11310	1913 July 28	None	V. slight	None	0.00	.0010	.0010	.3000	.0000	1.70	1.2	....	....	0	....

Examination of Water from Spring of W. E. Barrett Supplying Barrett Farm.

11314	1913 July 28	Sl. opal	Sl. earth	Sl. earth	0.05	.0006	.0010	.0050	.0000	.10	1.4	0
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Examination of Water from Well of Wm. McKay Supplying Ferndale Farm.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11315	1913 July 28	None	None	None	0.05	.0010	.0010	.1500	Ft. tr.	.85	4.6	....	....	0	....

Lyme.—The gravity supply of the Lyme Aqueduct Company is from springs.

Examination of Water from Supply of the Lyme Aqueduct Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10917	1913 Apr. 17	V. slight	Sl. white floc.	None	0.05	.0014	.0066	.0150	.0000	.10	2.0	.020	....	0	....
12102	1914 May 11	None	None	None	0.00	.0006	.0014	.0030	.0000	.06	2.4	.015	....	0	0

Manchester.—Source of city supply, Lake Massabesic; main reservoir, 15,000,000 gallons; low service by gravity; high service from 4,000,000 gallon reservoir; 110 miles distributing mains; service pipes, lead-lined iron; average daily consumption, 3,500,000 gallons.

Examination of Water from Lake Massabesic and Tributaries.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10543	1912 Oct. 8	None	None	None	0.18	.0010	.0090	.0050	.0000	.23	0.4	...	...	+	....
10720	1913 Jan. 22	None	V. slight	Sl. marsh	0.35	.0012	.0124	.0050	.0 00	.25	0.3	....	....	0	....
10722	Jan. 23	V. slight	V. slight	Mark veg.	0.35	.0010	.0130	.0050	.0000	.25	0.3	....	....	0	—
10784	Feb. 24	V. slight	V. slight	Sl. marsh	0.35	.0010	.0140	.0025	.0000	.15	0.1	....	....	0	2
10785	Feb. 24	V. slight	V. slight	Sl. marsh	0.30	.0010	.0150	.0025	.0000	.18	0.1	....	....	0	3
10898	Apr. 14	D. red sediment	Heavy	Linseed	0.45	V. high	V. high	.0100	.0000	1.50	1.5	.300	....	0	3
11185	June 23	Slight	Slight	Strong arom.	0.35	.0010	.0090	.0050	.0000	.23	0.1	.000	....	0	....
11605	Sept. 17	V. slight	Sl. gray floc.	None	0.25	.0006	.0124	.0050	.0000	.18	0.4	....	....	0	3
11606	Sept. 17	V. slight	Slight	Sl. swamp	0.30	.0010	.0134	.0050	.0000	.16	0.4	....	+	0	2
11824	Dec. 15	None	Sl. white floc.	Sl. earth	0.15	.0014	.0068	.0025	.0000	.18	0.3	....	....	0	+ ⁴
11919	1914 Feb. 23	V. slight	Mod. ferrug.	Sl. swamp	0.65	.0014	.0180	.0100	Tr.	.30	1.1	.020	....	0	0
11952	Mar. 16	Sl. opal	V. slight	Ft. swamp	0.55	.0018	.0102	.0050	.0000	.20	0.7	....	....	0	0
12175	June 1	None	V. slight	None	0.45	.0012	.0134	.0050	.0000	.19	0.3	....	....	0	+ ²
12176	June 1	None	Sl. floc.	None	0.45	.0026	.0136	.0050	.0000	.18	0.3	....	....	0	+ ³
12233	June 18	Slight	Sl. fine earth	Sl. marsh	0.45	.0016	.0124	.0050	.0000	.20	0.6	....	....	+	+⁵
12234	June 18	V. slight	V. sl. fine	V. slight	0.40	.0014	.0110	.0030	.0000	.19	0.3	....	....	0	+ ³
12235	June 18	Slight	Sl. gelat.	Sl. arom.	0.45	.0016	.0118	.0030	.0000	.18	0.3	....	....	+	+⁶
12357	July 14	V. slight	Mod fine	V. slight	0.38	.0010	.0103	.0030	.0000	.15	0.1	....	....	0	0 ⁷
12356	July 14	Slight	Mod. floc.	None	0.35	.0014	.0103	.0030	.0000	.14	0.1	....	....	0	0 ⁶

Examination of Water from Lake Massabesic—Continued.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
12358	1914 July 14	Slight	Sl. floc.	V. slight	0.50	.0018	.0134	.0030	.0000	.17	0.1	...	...	0	0 ¹
12393	July 20	Slight	Mod. floc.	Slight	0.35	.0016	.0128	.0030	.0000	.19	0.3	...	...	0	0 ³
12394	July 20	Mod.	Mod. floc.	Arom.	0.55	.0014	.0134	.0050	.0000	.56	1.5	...	...	0	0 ⁸
12395	July 20	Slight	Consid. brn. floc.	Sl. arom.	1.10	.0016	.0200	.0030	.0000	.17	0.6	...	...	0	0 ⁹
12396	July 20	Mod.	Con. floc. gelat.	Swamp.	2.20	.0050	.0420	.0030	.0000	.18	1.1	...	...	0	0 ¹⁰
12397	July 20	Slight	Mod. floc.	None	0.45	.0044	.0160	.0030	.0000	.30	1.2	...	...	0	0 ²
12398	July 20	Slight	Mod. floc.	None	0.40	.0020	.0144	.0030	.0000	.18	0.1	...	...	0	0 ²

¹Front pond.

²High service reservoir.

³Low service reservoir.

⁴Emery brook.

⁵Brook (near station).

⁶Canal.

⁷Back Pond.

⁸Neil brook (near highway).

⁹Sucker brook.

¹⁰Merrill brook.

Examination of Ice, Supply of Maxwell Ice Co.

10801	1913 Mar. 6	V. slight	Sl. fibre	V. sl. earth	0.00	.0030	.0010	.0025	.0000	.03	0.0	...	...	0	...
12088	1914 May 7	None	Slight	Slight	0.02	.0022	.0030	.0030	.0000	.03	0.0	...	...	0	0 ¹

¹As Supplied to Boston & Maine Railroad, ut from Black Brook.

Examination of Ice Supply of Manchester Coal and Ice Company.

10802	1913 Mar. 6	V. slight	Sl. earth	Sl. veg.	0.00	.0080	.0020	.0025	.0000	.03	0.0	...	...	0	1
10803	Mar. 6	V. slight	Mod. fibre	Veg.	0.00	.0030	.0020	.0025	.0000	.03	0.0	...	...	0	0 ²
10824	Mar. 24	V. slight	V. sl. fibre	None	0.00	.0010	.0015	.0025	.0000	.04	0.0	...	...	0	0 ¹
12088	1914 May 7	None	V. slight	None	00	.0010	.0020	.0030	.0000	.03	0.0	...	...	0	0 ²

¹Massabesic Lake.

²Nutt Pond

³As supplied Boston & Maine Railroad, from Massabesic Lake.

*Examination of Water and Ice from *Pond of James Light stone
(at Hooksett Line; ice to be sold in Manchester).*

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11839	1913 Dec. 30	V. slight	V. slight	.....	0.80	.0010	.0126	.0050	Ft. tr.	.10	0.4	....	....	+	+¹
11934	1914 Mar. 9	None	V. slight	None	0.06	.0010	.0026	.0030	.0000	.03	0.0	....	....	0	0 ²

¹Water.

²Ice.

*Following an inspection by the Board certain changes in drainage disposal were effected.

*Examination of Water from Pond owned by J. B. Bolduc.
(Proposed source of ice supply.)*

11825	1913 Dec. 15	Mod. opal	Sl. fine	Earthy	0.80	.0022	.0194	.0050	.0000	.40	0.9	0
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*Examination of Water from Well of Manchester Light & Traction
Company, Supply of Hotel on Uncanoonuc Mountain.*

11691	1913 Oct. 18	None	None	Decid. veg	0.05	.0050	.0074	.0050	High	.08	3.3	0
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Marlborough.—The W. H. Aldrich system furnishes water to a small number of families from a spring.

Examination of Water from Spring owned by White Heirs.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10682	1912 Dec. 19	Mod. opal	V. slight	None	0.15	.0070	.0020	.0025	.0000	.05	1.9	....	....	0	....

Examination of Water from Supply of W. H. Aldrich.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10683	1912 Dec. 19	Slight	Mod. earth	None	0.15	.0005	.0070	.0025	Ft. tr.	.15	4.6	0.50	....	0	....
10795	1913 Mar. 5	Slight	Mod. grey floe.	None	0.07	.0006	.0010	.0200	.0000	.25	0.9	0.30	....	0	..

Examination of Water from Well of W. A. Moors.

10717	1913 Jan. 20	None	None	None	0.00	.0010	.0010	.0025	.0000	.10	0.6	0.50	0
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Examination of Water from Spring of Collins & Richardson.

10721	1913 Jan. 21	None	V. slight	None	0.00	.0012	.0018	.0200	.0000	.15	1.2	0.30	+
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Examination of Water from Well of Methodist Church.

10796	1913 Mar. 3	Slight	Mod. earth	Earthy	0.15	.0010	.0110	.0250	.0000	2.45	2.6	.010	0
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Meredith.—The precinct system consists of a gravity supply from springs and a stream.

Examination of Water from Supply of the Meredith Fire District.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10962	1913 Apr. 29	Sl. opal	V. slight	None	0.10	.0010	.0070	.0050	.0000	.10	0.3	....	....	0	....
12075	1914 May 7	None	None	None	0.04	.0010	.0040	.0030	.0000	.11	0.4	....	....	0	0

Examination of Water from Spring of C. N. Roberts.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10976	1913 May 21	Slight	Sl. coarse veg.	V. slight	0.07	.0006	.010	.0025	.0000	.03	0.4	....	....	0	....

Examination of Water from Spring of Eben Lincoln Supplying Prospect House.

11339	1913 July 30	Ft. opal	V. slight	None	0.05	.0006	.0010	.0025	Tr.	0.7	1.2	.075	+
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Examination of Water from Wells of Austin Moulton Supplying The Elmwood.

11334	1913 July 30	Sl. opal	V. slight	Slight	0.05	.0010	.0010	.0200	.0000	.35	2.3	....	....	+	....
11336	July 30	None	None	None	0.05	.0010	.0010	.0500	Tr.	.07	2.0	....	....	+	....

Examination of Water from Spring of J. R. Lovett Supplying Gram-pian House.

11344	1913 July 31	Sl. opal	Slight coarse	None	0.05	.0006	.0010	.0025	.0000	.04	0.7	.075	..	0
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Merrimack.—The public water system supplying Merrimack village and owned by the United Realty Company is taken directly from the Souhegan River, a polluted source. As a result of a recent inspection and order by the Board, a new system from driven wells is to be installed at once. (See special report elsewhere.)

Examination of Water from Supply of United Realty Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli		
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.	
11855	1914 Jan.	5	V. slight	V. slight	V. sl. swamp	0.30	.0014	.0096	.0050	.0000	.25	0.4	....	....	0	+ ¹
11856	Jan.	5	V. slight	Sl. fine veg.	Sl. swamp	0.30	.0010	.0090	.0050	.0000	.25	0.4	....	....	0	+ ²
12089	May	8	Slight	Sl. floc	Marshy	0.38	.0012	.0084	.0050	.0000	.25	0.3	...	....	+	+¹
12308	July	2	Mod.	Mod. floc	None	0.05	.0026	.0146	.0030	.0000	.24	0.9	....	....	+	+³
12464	Aug.	11	V. slight	V. slight	Sl. earth	0.03	.0020	.0026	.0030	.0000	.08	0.3	....	...	0	0 ⁴

¹ Intake in Souhegan River.² Souhegan River, 150 yards above intake.³ Tap⁴ Spring, possible public supply.

Milford.—The town system consists of three wells, the water being pumped to a 250,000-gallon standpipe.

During 1913 there was some shortage, and samples were submitted from a stream under consideration as an auxiliary source. Apparently it has not as yet been found necessary to have recourse to the latter; upon notifying the local officials of the law which, under a maximum penalty of one thousand dollars, requires securing the formal approval of the Board before adoption of any new source, it was replied that while this source was under consideration, it had not thus far been found necessary to resort to it.

Examination of Water from Faucet of Milford Water Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10966	1913 April 21	V. slight	Sl. fine	None	0.15	.0010	.0050	.0050	.0000	.12	0.6	....	....	0	....
11213	July 9	V. slight	Sl. fine	Dist. arom.	0.55	.0010	.0150	.0050	.0000	.13	0.3	....	....	0	....³
11214	July 9	None	None	None	0.18	.0010	.0038	.0050	.0000	.14	0.6	....	....	0	....
61296	July 24	V. slight	Mod. fine veg.	Dist. musty	0.45	.0014	.0150	.0050	.0000	.11	0.3	....	....	+	....¹
11297	July 24	Sl. fine	Sl. br'wn floe	Sl. veg.	0.45	.0014	.0140	.0050	.0000	.10	0.1	....	....	0	....²
11298	July 24	V. slight	Sl. br'wn floe	V. sl. veg.	0.45	.0014	.0156	.0050	.0000	.10	0.1	....	....	0	....³
1 1977	1914 April 1	Mod. opal	Sl. earth	Sl. earth	0.45	.0010	.0036	.0050	.0000	.14	1.2	....	....	0	0
11998	April 13	V. sl. opal	V. sl. fine	None	0.15	.0010	.0054	.0050	.0000	.12	1.4	....	....	0	0

¹ Stream 600 ft. above Pumping Station.
² Stream 300 ft. above Pumping Station.
³ Stream, proposed emergency intake.

Examination of Water from Well of French & Heald Co.

10899	1913 May 12	V. sl. opal	None	None	0.05	.0020	.0024	.0050	High	0.45	3.9	0
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Moultonborough.

Examination of Water from Well of A. S. Freese, Supplying Maple Hurst.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11333	1913 July 31	Sl. opal	V. slight	None	0.07	.0010	.0050	0.750	Ft. trace	2.00	7.9	..	..	0	....

Examination of Water from Spring of E. C. Kent, Supplying Red Oaks.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11335	1913 July 31	None	None	None	0.05	.0006	.0006	.0050	.0000	.05	1.6	.075	....	+	....

Examination of Water from Well of W. D. Robinson, Supplying Prospect Cottage.

11340	1913 July 30	None	V. slight	None	0.05	.0010	.0100	.1000	.0000	2.90	8.9	0
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Examination of Water from Well of Ernest Davis, Supplying Pleasantdale.

11345	1913 July 31	None	V. slight	Arom.	0.05	.0006	.0010	.0025	.0000	.05	1.7	+	..
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Nashua.—The Pennichuck Water Works furnishes water from springs and artesian wells. The water is accumulated in a large natural open basin, from which it is pumped to a distributing reservoir of 4,000,000 gallons. Daily consumption, 2,750,000 gallons.

Examination of Water from Supply of Pennichuck Water Works.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11027	1913 May 17	V. slight	V. slight	Dist m'tst earthy	0.07	.0010	.0060	.0025	.0000	.18	2.2	....	Ft. tr.	0	....
11368	Sept. 9	None	V. slight	Earthy	0.05	.0006	.0024	.0050	.0000	.20	1.9	.000	....	0	....
12161	1914 May 27	None	None	Dist. veg.	0.05	.0006	.0026	.0050	.0000	.16	1.6	....	....	0	0

Examination of Ice, Supply of Geo. E. Balcom Ice Co., Supplied to Boston & Maine Railroad.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
12,243	1914 June 17	V. slight	Sl. fibu.	None	0.00	.0006	.0020	.0030	.0000	.05	0 0	....	....	0	0

Examination of Ice Cut from Sandy and Ottarnic Ponds.

12,279	1914 June 24	Consid. opal	V. slight	V. sl. marsh	0.00	.0006	.0014	.0030	.0000	.04	0.0	....	....	0	....¹
12,280	June 24	Slight	Sl. fibu.	None	0.00	.0006	.0010	.0030	.0000	.05	0.0	....	....	0	....²

¹ Sandy Pond. ² Ottarnic Pond

Examination of Water from Well of Alphonse Rioux.

10,523	1913 Aug. 28	Consid. white	Consid. gelot.	Veg.	0.35	V. high	Hih.	1.500	V. high	5.00	8.9	C'n sid.	0
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New Boston.—The Burnham Hill Water Company furnishes water to its stockholders from wells located in grass land. The abnormal contents of nitrate and chloride indicate some seepage, resulting from applied manure or fertilizer.

Examination of Water from Supply of Burnham Hill Water Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
12,017	1914 April 13	None	None	Sl. foul	0.05	.0008	.0018	.2500	.0000	1.10	6.0	.050	....	0	....
12 069	May 5	None	Sl. earth	None	0.02	.0006	.0030	.0300	.0000	.37	2.6	....	....	0	0
12,070	May 5	V. sl. opal	V. slight	V. sl. earth	0.03	.0006	.0028	.0500	.0000	.46	2.6	.010	....	0	0
12 071	May 5	None	V. sl. silt	None	0.08	.0003	.0074	.1000	.0000	1.30	4.9	.005	....	0	0
12,072	May 5	Sl. opal	Sl. flocc.	V. slight	0.02	.0010	.0064	.250	.0000	1.70	5.9	.005	...	0	0
12,073	May 5	None	V. sl. earth	None	0.00	.0003	.0022	.1500	.0000	.85	4.0	.010	....	0	0

New Durham.*Examination of Water from Merry-meeting Lake, Source of the New Hampshire Water Supply Company.*

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10805	1913 Mar. 9	Slight	V. slight	Sl. veg.	0.07	.0015	.0060	.0025	.0000	.18	0.3	....	....	0	....

New Hampton.—The precinct operates a gravity system from a pond, through a distributing reservoir of 5,000,000 gallons.

Examination of Water from Precinct Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10956	1913 Apr. 28	None	None	Ft. earth	0.10	.0014	.0054	.0025	.0000	.09	0.1	....	....	0	....
12103	1914 May 10	None	None	None	0.07	.0008	.0014	.0030	.0000	.08	0.1	...	...	0	0

New Ipswich.*Examination of Water from Well of James Roger, Used by Public.*

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
1100	1913 May 12	None	None	None	0.05	.0006	.0050	.005	.0000	.25	3.5	.030	....	0	...

New London.—The C. E. Shepard supply is from two drilled wells, the water being pumped to a 30,000-gallon reservoir.

Examination of Water from Shepard Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10932	1913 May 9	None	V. slight	None	0.05	.0010	.0110	.0025	.0000	.05	2.6	....	....	0	....

Examination of Well Supplying Colby Academy.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10731	1913 Jan. 25	None	None	Sl. earth	0.05	.0014	.0010	.0750	.0000	1.65	8.9	....	....	0	....

Examination of Water from Kings Hill Brook.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11996	1914 Apr. 13	V. slight	Slight	Sl. swamp	0.27	.0006	.0080	.0050	.0000	.07	0.7	....	....	0	0

Newmarket.—The town system consist of water pumped from Follet's Creek to a 22,000-gallon standpipe. During 1913-14 three deep drilled wells were constructed near the brook intake, but this water has not as yet been turned into the system. (See special report elsewhere.)

Examination of Water from Town Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10943	1913 Apr. 15	Consid. opal	V. sl. fine	Consid. earth	0.55	.0010	.0080	.0250	.0000	.30	1.4	....	....	0	....
12107	1914 May 13	Mod. opal	Mod. fine	None	0.30	.0010	.0140	.0200	.0000	.23	1.6	0.05	....	+	+
12137	May 20	Mark. opal	None	None	0.00	.0008	.0016	.0070	.0000	.42	2.4	....	.010	0	0 ¹
12162	June 1	None	V. slight	V. sl. foul	0.00	.0006	.0014	.0600	.0000	.43	2.2	....	....	0	0 ²
12549	Aug. 31	Consid. opal	Sl. fine	Ft. arom.	0.25	.0030	.0100	.0400	.0000	.40	2.2	....	....	0	0

¹Artesian well.
²Brailey Spring.

Examination of Water from "Tozeles Well."

12548	1914 Aug. 31	None	V. slight	None	0.03	.0008	.0030	.7000	Tr.	1.90	6.7	+
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Newport.—A gravity system owned by the town supplies water from a pond. Some cement-lined service pipe used.

Examination of Water from Town Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10964	1913 Apr. 30	V. sl. opal	Sl. earth	Ft. earth	0.15	.0010	.0070	.0050	.0000	.10	0.1	....	....	0	...
12181	1914 June 3	None	V. slight	Earthy	0.10	.0010	.0058	.0030	.0000	.09	0.4	....	....	0	+
12500	Aug. 18	Slight	Sl. floe.	.....	0.07	.0006	.0050	.0050	.0000	.08	0.4	....	....	0	....

Newton.*Examination of Water from Well Supplying School.*

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10552	1912 Oct. 15	None	None	Earthy	0.05	.0020	.0015	3000	High	3.20	11.8	....	....	+	....

North Hampton.*Examination of Water from Artesian Well Supplying School.*

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10533	1912 Oct 3	Heavy opal	Mod. ferrug.	None	0.30	.0010	.0015	.0050	.0000	1.55	7.4	....	....	0	....

Examination of Water from Artesian Well Supplying Hotel.

11610	1913 Sept. 17	None	None	Sl. arom.	0.05	.0010	.0024	.1750	High	7.65	8.1	....	....	0	....
11622		None	Sl. white floe.	None	0.05	.0100	.0054	.0100	Ft. tr.	8.45	6.0	....	....	0	....

Northumberland.—Groveton village precinct is supplied with water by a gravity system from mountain streams.

Examination of Water from Groveton Village Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10980	1913 April 30	None	None	None	0.15	.0006	.0030	.0025	.0006	.05	0.1	....	....	0	....
12163	May 28	None	V. sl. floe.	None	0.60	.0012	.0026	.0030	.0000	.05	0.3	....	....	0	0

*Examination of Water from River.
(Numerous lumber camps at source.)*

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11922	1914 Mar. 2	V. slight	Mod. gray floe.	Earthy	0.25	.0042	.0074	.0100	.0000	.06	0.6	....	....	0	....

Ossipee.—A gravity system from ponds was installed during 1911 by the Ossipee Water and Electric Company.

Examination of Water from the Supply of the Ossipee Water & Electric Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11175	1913 June 21	Mod.	Mod. br. floe.	Earth	0.20	.0010	.0060	.0050	.0000	.08	0.1	....	....	0	....
11411	Aug. 12	None	Slight	None	0.00	.0010	.0040	.0050	.0000	.05	0.3	....	....	0	....

Examination of Water from Spring of C. W. White, Supplying Mt. Whittier House.

11412	1913 Aug. 12	None	V. slight	None	0.05	.0006	.0010	.0050	.0000	.05	1.1	0
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Examination of Water from Well of J. H. Graham, Supplying Hackmatack Farm.

11414	1913 Aug. 13	None	None	None	0.05	.0010	.0020	.0100	.0000	.15	1.4	0
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Examination of Water from Well of Mrs. Hattie Kershaw, Supplying "The Sunnyside House."

11415	1913 Aug. 13	None	None	V. slight	0.05	.0010	.0030	.0050	.0000	.35	1.9	0
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Examination of Water from Well of W. N. Connor, Supplying West Ossipee House.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11416	1913 Aug. 12	None	None	None	0.05	.0006	.0010	.1000	.0000	.18	1.9	....	....	0	...

Examination of Well of J. E. Hodgdon, Supplying Hackmatack Farm.

11417	1913 Aug. 13	Slight	Sl. flocc.	Sweet	0.05	High	V. High	.2500	.0000	3.10	7.4	+
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Examination of Water from Spring of Frank Hanson, Supplying Carroll Inn.

11428	1913 Aug. 13	V. slight	Sl. coarse	V. sl. earth	0.05	.0010	.0030	.2500	.0000	.65	1.9	0
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Pembroke.—The leading supply of Suncook village is from a pond and brook. During 1914 the town of Pembroke acquired this system of the Suncook Water Works Company, and at this date has under construction a system having its source in Pleasant Pond, Deerfield, such being designed to supply Pembroke, Suncook, Allenstown, and probably eventually other neighboring localities. (See special report elsewhere.)

Examination of Water from Supply of Suncook Water Works.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10771	1913 Feb. 20	Slight	None	Marsh	0.80	.0010	.0085	.0050	.0000	.18	0.1	....	...	0	....
11062	May 28	V. slight	Slight	Arom.	1.40	.0010	High	.0100	.0000	.15	0.1	..	....	0	....
11472	Aug. 15	Slight	Sl. floe.	Arom.	0.60	.0010	.0110	.0050	.0000	.17	0.1	....	....	+	....
12157	1914 May 25	V. slight	V. sl. floe.	V. sl. swamp	0.60	.0086	.0000	.0020	.0000	.15	0.1	....	....	0	+ ¹
12153	May 25	Slight	Sl. floe.	Dist. swamp	0.40	.0033	.0124	.0030	.0000	.16	0.1	....	....	0	0 ²
12152	May 25	Slight	Sl. floe.	Dist. arom.	1.00	.0020	.0162	.0020	.0000	.16	0.1	...	....	0	0

¹Cold spring reservoir.²Bear Hill pond.*Examination of Water from Pleasant Pond, Deerfield, Source of New Public Supply for Pembroke.*

10765	1913 Feb. 15	V. slight	V. slight	V. sl. marsh	0.05	.0010	.0110	.0050	.0000	.30	0.7	0
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Examination of Water from Artesian Well Supplying Pembroke Sanatorium.

11576	1913 Sept. 11	Consid.	Mod. floe.	Sl. earth	0.20	.0004	.0003	.0050	.0000	.20	1.9	...	300	0
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Examination of Water from Well Supplying Congregational Parsonage.

11509	1913 Aug. 29	Heavy opal	Sl. earthy	Slight	0.10	.0010	.0030	.0075	.0000	1.20	4.6	0
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Peterborough.—Gravity system owned by town. Source, pond and brook. Service pipes, cement-lined iron.

Examination of Water from Tap of Town Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10715	1913 Jan. 11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.060	.....	0	.....
10959	Apr. 30	Slight	Sl. floe.	None	0.45	.0010	.0090	.0050	.0000	.10	0.1	.....	.....	0	.....
11023	May 12	Consid. floc.	Mod. floc.	V. slight	0.08	.0010	.0116	.0050	.0000	.05	0.1	.....	.....	0	.....
12010	1914 April 15	V. slight	Sl. floe.	Sl. veg.	0.20	.0008	.0048	.0050	.0000	.06	0.1	.....	.....	0	0
12136	May 18	V. sl. opal	Mod. floc.	V. sl. veg.	0.10	.0010	.0184	.0100	.0000	.05	0.3	.....	.....	0	+

Examination of Water from Supplies owned by MacDowell Memorial Association.

11272	1913 July 21	None	V. slight	Sl. earth	0.05	.0006	.0010	.0500	Ft. tr.	.10	1.9	.....	.....	0	¹
11273	July 21	V. ft. opal	None	None	0.00	.0010	.0016	.0750	.0000	2.45	1.2	.010	.....	0	²
11274	July 21	None	Mod. silt.	None	0.05	.0006	.0010	.500	Hi ^h	.30	6.0	...	..	0	²
11275	July 21	Ft. opal	V. sl. opal	None	0.00	.0006	.0015	.0500	.0000	.20	1.9	.....	.....	0	²

¹Spring.
²Well.

Pittsfield.—The gravity system of the Pittsfield Aqueduct Company is supplied from a pond. Distributing reservoir, 1,500,000 gallons. Service pipes, cement-lined and galvanized iron.

Examination of Water from the Pittsfield Aqueduct Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10958	1913 Apr. 30	Mod. opal	Sl. earthy	None	0.07	.0010	.0060	.0050	.0000	.15	0.3	.....	.....	0	.....
12128	1914 May 15	V. slight	Sl. fine	Sl. earth	0.08	.0010	.0050	.0030	.0000	.15	0.3	.....	...	0	+

Plainfield.—The original source of the Meriden Water Company was in some springs and wells, with gravity flow. During 1913 this source went practically dry and recourse was had to a brook. The latter water is of excellent quality. (See special report elsewhere.)

Examination of Water of Meriden Water Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10957	1913 Apr. 30	None	Sl. floe.	None	0.05	.0010	.0010	.0025	.0000	.08	2.2	...	app.	0	1
11595	Sept. 17	None	V. slight	None	0.05	.0002	.0050	.0010	.0000	.07	1.6	....	....	0	0 ²
12101	1914 May 11	Sl. opal	Mod. earth	Sl. earth	0.02	.0030	.0052	.0030	.0000	.07	1.9	...	...	0	0 ¹

¹Spring and well supply.
²Brook.

Plymouth.—Gravity system owned by town from series of springs and wells. Distribution from two reservoirs having a capacity of 4,000,000 gallons. Recently two or three large dug wells were constructed on the intervalle between the Pemigewasset and Baker Rivers, near the peg mill, the water being pumped into the mains. While thus far the water has proved to be of excellent quality, there are some objectionable features in connction with the surroundings. (See special report elsewhere.)

Examination of Water from Town Supply

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10940	1913 Apr. 24	None	V. sl. fine	V. sl. earth	0.10	.0006	.0030	.0050	.0000	.07	1.1	...	...	0	....
12007	1914 Apr. 15	None	V. sl. earth	Strong earth	0.02	.0008	.0016	.0050	.0000	.06	1.6	...	...	0	0 ¹
12008	Apr. 15	None	V. slight	Dist. earth	0.00	.0008	.0012	.0050	.0000	.07	1.8	...	...	0	+ ¹
12009	Apr. 15	V. ft. opal	V. slight	None	0.18	.0006	.0040	.0050	.0050	.08	1.5	...	...	0	0 ² + ²
12053	Apr. 23	None	V. slight	None	0.00	.0006	.0016	.0010	.0000	.06	0.9	...	...	0	
12054	Apr. 28	None	V. slight	None	0.00	.0006	.0016	.0010	.0000	.06	0.9	...	...	0	0 ¹

¹Pump at peg mill, lower well supply.²Pump at peg mill, lower wells not turned on.*Examination of Water from Well of F. H. Caldon, Supplying "The Elmwood."*

11458	1913 Aug. 11	None	V. slight	V. slight	0.05	.0010	.0030	.0050	.0000	.03	1.1	0
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Portsmouth.—The city supply is derived from springs and wells, pumped to a standpipe of 500,000 gallons. Of late the supply has been inadequate and plans are now under consideration for securing more water.

Examination of Water from Portsmouth Water Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10749	1913 Feb. 7	Mod. opal	Sl. earth	Sl. veg.	0.03	.0010	.0030	.0100	.0000	.85	3.2	....	....	0	....
10990	May 8	None	V. slight	None	0.00	.0010	.0020	.0100	.0006	.65	6.7	....	....	0	....
12272	1914 June 23	None	None	None	0.05	.0006	.0014	.0200	.0000	.60	7.4	....	....	0	0

Examination of Water from Well of L. W. Thompson, Used by Public.

Number	Date of Collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11070	1913 May 25	Slight	Sl. coarse	Earth	0.20	.0054	.0105	.2500	.0000	1.20	3.9	....	....	0	....

Examination of Water from Well belonging to City, and Used by Campers.

11072	1913 May 25	V. slight	Slight	Greasy	0.07	.0100	V. high	.2000	.0000	1.20	2.0	0
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Examination of Water from Well of John Yarwood, Used by Public.

11405	1913 Aug. 16	None	V. slight	Slight	0.05	.0014	.0020	.0750	High	1.50	12.4	0	...	0
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Examination of Water from Well of Harry H. Woods, Used by Public.

12238	1914 June 13	V. sl. opal	Sl. gelat.	V. slight	0.05	.0008	.0028	.2000	.0000	8.60	8.9	0
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Raymond.—The town water system consists of driven wells forty to sixty feet deep, the water being pumped to a standpipe of 120,000 gallons. For some years the analyses of this supply have been unsatisfactory, the excessive chloride and nitrate contents pointing to a direct relation with some contamination source.

Examination of Water from Raymond Supply.

Number	Date of Collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10942	1913 Apr. 25	V. slight	None	None	0.05	.0015	.0020	.3000	Dist. tr.	2.90	5.0	....	....	0	....
11446	Aug. 18	None	None	None	0.05	.9010	.0020	.225	.0000	2.00	4.6	....	....	0	....
12105	1914 May 13	None	None	None	0.03	.0010	.0028	.225	.0000	2.30	4.3	....	....	0	0

Rochester.—The city water supply consists of a gravity system having its source in a pond.

Examination of Water from Rochester Supply.

Number	Date of Collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10961	1913 Apr. 30	Slight	Slight fine	Sour	0.45	.0010	.0100	.0025	.0000	.11	0.3	....	....	0	....
12027	1914 Apr. 22	Sl. opal	V. slight fine	Earth	0.35	.0020	.0140	.0050	.0000	.17	0.4	....	....	0	0

Examination of Water from Well owned by Spaulding Bros., Used by Public.

11279	1913 July 22	Sl. opal	None	None	0.07	.0010	.0015	.1500	Tre.	1.70	3.2	.075	0
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Examination of Water from Well of Smalley & Huntress, Used by Public.

11422	1913 Aug. 15	None	None	None	0.05	.0010	.0040	.5000	.0000	2.10	5.3	.020	0
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Examination of Water from Well of Boston Brick Co., Used by Public.

11553	1913 Sept. 4	V. slight	Slight	None	0.05	.0030	.0030	.0050	.0000	.18	3.2	0
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Examination of Water from Spring of J. B. Stevens, Sold to Public.

11555	1913 Sept. 5	None	None	None	0.03	.0010	.0010	.0050	.0000	.07	0.1	0
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Rollinsford.

Examination of Water from Wells of Salmon Falls Manufacturing Company.

Number	Date of Collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11189	1913 June 25	Mod. opal	V. slight	Veg.	0.07	.0020	.0070	.0200	.0000	.90	4.6	....	...	0	....
11511	Aug. 27	Mod. opal	V. slight	Earth	0.15	.0034	.0040	.0100	.0000	1.00	12.4	....	...	0	....
11878	1914 Jan. 29	None	None	None	0.05	.0010	.0070	1.0000	.0000	1.90	25.0	....	...	0	... ¹
11879	Jan. 29	None	None	None	0.05	.0012	.0066	1.0000	.0000	3.40	14.8	....	...	0	... ²
11880	Jan. 29	None	None	V. sl. foul	0.05	.0010	.0060	.8000	.0000	7.00	12.4	...	...	0	... ³
11881	Jan. 29	None	None	None	0.05	.0008	.0072	.5000	.0000	2.40	13.4	.010	...	0	... ⁴

¹ Well in Mill Yard. ² Well on Main Street.
³ Well on Second Street. ⁴ Spring

Examination of Water from Public Well.

10885	1913 April 9	V. slight	V. slight	None	0.05	.0010	.0050	1.0000	.0000	12.0	12.4	+
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Examination of Water from Well of John F. Goodwin, Used by Public.

10886	1913 April 9	None	None	None	0.05	.0010	.0040	1.0000	.0000	12.0	6.0	0
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Examination of Water from Well owned by Alfred Parent and J. Q. A. Wentworth.

11188	1913 June 25	Sl. opal	Slight	V. slight	0.05	.0040	.0040	5.0000	Tr.	11.5	16.0	0
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Examination of Water from Well of Francis Ham, Used by Public.

11510	1913 Aug. 27	V. slight	None	Sl. earth	0.05	.0010	.0020	.0050	.0000	.20	1.9	0
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Examination of Water from Well of W. F. McNally, Used by Public.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11512	1913 Aug. 27	None	None	Slight	0.10	.0010	.0080	1.0000	Hi'h	11.0	30.0	...	....	+	....

Rumney.

Examination of Water from Spring of Daniel Pillsbury.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
12477	1914 Aug. 12	None	None	None	0.03	.0010	.0014	.0030	.0000	.08	2.0	....	....	0	....

Rye.

Examination of Water from Artesian, Well Supplying Ocean Wave House, Rye North Beach.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11211	1913 July 4	Mod. opal	V. slight	Sl. earth	0.10	Hi'h	.0020	.5000	Tr.	112.0	8.1	...	...	0	....

Salem.—The town operates a gravity system, the source being Canobie Lake. (See special report elsewhere.)

Examination of Water Taken from Town Supply.

Date of collection		Source		Residue		Ammonia		Chlorine	Hardness	Iron	Reaction of 100 c. c. with $\frac{N}{50}$ neutralizer, using:							
				Total	Fixed	Free	Albuminoid				Methyl Orange	Phenolphthalein				Cold	After Boiling	
11,246	1913 July 16	V. slight	Sl. floe		Mark. arom.	0.18	.0010	.0070	.0050	.0000	.45	0.3	...	...	0	...
12,177	1914 May 29	None	None		None	0.13	.0014	.0106	.0050	.0000	.39	0.4	....	....	0	0

Salisbury.*Examination of Water from Wells at Webster Birthplace.*

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11350	1913 Aug. 1	None	None	Sl. foul	0.05	.0010	.0060	.2000	Tr.	1.30	2.6	.....	.....	+	.....
11351	Aug. 1	Mod.	Mod. grey floe.	Mark veg.	0.05	V'ry high	V'ry high	.3000	High	1.90	5.3	.....	.....	+	.....
12444	1914 Aug. 4	None	Sl. floe.	None	0.03	.0006	.0050	.0050	Tr.	.85	3.1	.....	.....	0	.....
12458	Aug. 10	Heavy opal	Mod. floe.	Mark veg.	0.50	.0240	.0220	.0030	.0000	.20	6.0	.....	Md	0	.....

New Well.

Examination of Water from Well Used by Public.

10379	1912 Dec. 18	None	V. slight	None	0.05	.0010	.0030	.0750	.0000	1.50	4.6	0		
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Sandwich.*Examination of Water from Well of Frank Tilton, Supplying Rockmere Farm.*

Number	Date of collection	Appearance				Ammonia		Nitrogen as							Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites	Chlorine	Hardness	Lead	Iron	1 c. c.	10 c. c.	
11423	1913 Aug. 11	None	None	None	0.05	.001	.00	.0050	.0000	.05	0.3	.010	.....	0	.....

Examination of Water from New Well of C. O. Haley, Supplying Tilton House.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,338	1913 July 30	Heavy opal	Consid. br. flocc.	Earth	0.20	.0110	.0050	.0050	High	.45	5.0	....	....	0	....

Examination of Water from Well of F. W. McLane, Supplying Sandwich House.

11342	1913 July 29	Ft. opal	None	Sl. foul	0.05	.0010	.0020	.2500	.0000	.70	5.0	+
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Hart's Location.

Examination of Water from Spring Supplying Main Central Railroad at Sawyer's River.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
12,200	1914 June 6	None	Slight	None	0.03	.0006	.0010	.0030	.0000	.06	0.6	....	....	0	0

Seabrook.

Examination of Water from Springs of C. E. Gore, Used by Public.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11911	1914 Feb. 19	Sl. opal	Sl. earth	Sl. foul	0.05	.0006	.0034	.0750	.0000	1.10	3.6	....	....	0	....
11929	Mar. 5	Sl. opal	V. slight	Sl. earth	0.10	.0020	.0109	.0600	.0000	.95	2.9	...	....	0	....
11930	Mar. 5	Slight	V. slight	Sl. earth	0.10	.0008	.0014	.0400	.0000	1.18	3.0		Sl't	0	...

Somersworth.—The city supply is taken from the Salmon Falls River. During 1912 an investigation of the filter plant having demonstrated its inadequacy for affording a safe supply, a system of sterilization based upon the use of liquefied chlorine gas was installed. (See elsewhere.)

Examination of Water Supplying Somersworth.

Number	Date of collection	Appearance				Ammonia		Nitrogen as						Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites	Chlorine	Hardness	Lead	Iron	1 c.c.	10 c.c.
10643	1912 Dec. 3	None	V. slight	Earthy	0.50	.0015	.0070	.0100	.0000	.20	1.4	.....	+	....
10662	Dec. 9	V. slight	Mod. flocc.	Mod. earth	0.70	.0015	.0150	.0050	.0000	.40	1.2	.....	0	+ ¹	
10663	Dec. 9	None	None	Ft. earth	0.60	.0015	.0090	.0050	.0000	.40	1.4	.....	0	+	
10664	Dec. 12	None	None	None	0.55	.0015	.0100	.0050	.0000	.40	1.4	.....	0	0	
10665	Dec. 12	Mod.	Sl. gelat.	Sl. earth	0.70	.0010	.0130	.0050	.00 0	.40	1.4	.....	+	+¹	
10667	Dec. 16	None	None	Sl. veg.	0.55	.0015	.0130	.0050	.0000	.80	2.7	.....	0	+	
10696	Dec. 30	None	None	Sl. marsh	0.50	.0010	.0130	.0050	.0000	.30	1.5	.....	0	...	
10708	1913 Jan. 13	Faint	V. slight	Sl. marsh	0.65	.0010	.0138	.0050	.0000	.35	2.2	.....	+	....
10729	Jan. 28	None	V. slight	Sl. marsh	0.50	.0010	.0116	.0050	.0000	.30	1.5	.....	+	....
10740	Feb. 3	None	V. slight	Marsh	0.50	.0010	.0110	.0100	.0000	.35	1.8	.....	+	....
10743	Feb. 6	V. slight	Sl. fine	Marsh	0.55	.0016	.0120	.0050	.0000	.25	1.1	.....	0	2	
10832	Mar. 24	V. slight	V. slight	Sl. swamp	0.55	.0010	.0110	.0050	.0000	.30	1.2	.....	0	....
10851	Mar. 31	Slight	V. slight	V. sl. swamp	0.55	.0010	.0086	.0100	.0000	.35	2.2	.....	0	....
10965	Apr. 29	Mod.	Mod. gelat.	Sl. earth	0.60	.0010	.0166	.0010	.0000	.35	0.9	.....	+	1	
11116	June 9	Slight	Mod. veg.	None	0.65	.0010	.0110	.0050	.0000	.35	0.9	.....	0	....
11496	Aug. 25	Sl. opal	V. slight	None	0.35	.0010	.0084	.0050	.0000	.33	1.9	.....	0	....
11619	Sept. 24	None	None	None	0.30	.0014	.0080	.0050	.0000	.33	1.2	.....	0	0	
11748	Nov. 10	None	V. slight	Sl. swamp	0.55	.0010	.0160	.0050	.0000	.34	1.9	.....	0	0	
11963	1914 Mar. 23	None	V. sl. flocc.	None	0.45	.0016	.0090	.0050	.0000	.26	1.1	.....	0	0	
12154	May 25	V. slight	None	None	0.40	.0014	.0084	.0050	.0000	.32	1.4	.....	0	0	
12329	July 8	V. slight	Slight	Sl. earth	0.45	.0030	.0100	.0030	.0000	.32	1.5	.....	0	+	
12469	Aug. 12	Mod.	Mod. veg.	V. slight	0.40	.0028	.0080	.0030	.0000	.32	1.9	.....	0	0	

¹River direct.

²Salmon Falls River in Milton, above contaminative sources. Note that the degree of color is as high as at Somersworth. It has been claimed in the past that the discharge of leatherboard waste was largely responsible for the color.

Bacterial Examination of the Somersworth Supply, Showing Results of Combined Filtration and Chlorine Treatment.

Date	Source.	Bacteria per cc.		Colon bacilli.	
		at 37° C.	at 20° C.	(1 cc.)	(10 cc.)
1913.					
March 31	Screen well	9000	.....	+	.....
	Filter well (untreated)...	280	.....	0	.....
	Boiler room	134	.....	0	.....
	Grove St.	50	.....	0	.....
April 10	Screen well	140	.....	+	.....
	Boiler room	30	.....	0	.....
	Hotel office	40	.....	0	.....
	Back St.	68	.....	0	.....
15	Screen well	480	.....	+	.....
	Boiler room	42	.....	0	.....
	Grove St.	84	.....	0	.....
	Rochester St.	96	.....	0	.....
21	Screen well .....	.....	.....	+	.....
	Boiler room	5	.....	0	.....
	Grove St.	16	.....	0	.....
	Rochester St.	16	.....	0	.....
30	Boiler room	18	.....	0	.....
	Mt. Vernon St.	24	.....	0	.....
	Rochester St.	16	.....	0	.....
	Grove St.	8	.....	0	.....
May 6	Screen well	166	.....	0	.....
	Boiler room	85	.....	0	.....
	Rochester St.	23	.....	0	.....
	Grove St.	8	.....	0	.....
13	Screen well	180	.....	+	.....
	Boiler room	18	.....	0	.....
	Grove St.	28	.....	0	.....
	Rochester St.	26	.....	0	.....
21	Boiler room	27	.....	0	.....
	Rochester St.	28	.....	0	.....
	Grove St.	32	.....	0	.....
27	Boiler room	24	.....	0	.....
	Rochester St.	28	.....	0	.....
	Grove St.	16	.....	0	.....
June 12	Screen well	890	.....	0	.....
	Boiler room	64	.....	0	.....
	Rochester St.	48	.....	0	.....
	Winter St.	98	.....	0	.....
19	Screen well	270	.....	+	.....
	Boiler room	38	.....	0	.....
	Rochester St.	46	.....	0	.....
	Grove St.	72	.....	0	.....
July 17	Screen well	200	32290	+	.....
	Filter well (untreated)...	170	28500	+	.....
	Boiler room	40	472	0	.....
	Boiler room	69	570	0	.....
29	Screen well	300	136500	+	.....
	Boiler room	12	1100	0	.....
	Boiler room	16	900	0	.....
	Rochester St.	45	1040	0	.....
Aug. 20	Screen well .....	.....	74000	+	.....
	Boiler room	31	450	0	.....
	Rochester St.	75	600	0	.....
	Grove St.	132	750	0	.....

Date	Source.	Bacteria per cc.		Colon bacilli	
		at 37° C.	at 20° C.	(1 cc.)	(10 cc.)
1913.					
Sept. 1	Screen well		75000	+	.....
	Boiler house	25	244	0	.....
	Rochester St.	69	340	0	.....
	Grove St.	40	224	0	.....
9	Screen well	400	2400	0	.....
	Boiler room	1	3	0	.....
	Grove St.	16	60	0	.....
	High St.	4	40	0	.....
29	Screen well		3700	+	.....
	Boiler room	12	.....	0	.....
	Rochester St.	4	14	0	.....
	Rochester St.	6	6	0	.....
Nov. 25	Screen well	210	630	+	+
	Filtered only	30	240	+	+
	Boiler room	1	30	0	0
	Rochester St.	1	20	0	0
Dec. 3	Screen well	200	800	+	+
	Filtered only	50	400	0	+
	Boiler room	1	5	0	0
	Rochester St.	2	4	0	0
1914.					
March 26	Screen well	36	1200	+	+
	Boiler room	6	10	0	0
	Grove St.	7	20	0	0
	Rochester St.	6	60	0	0
May 9	Screen well	190	700	+	+
	Filtered only	270	540	0	+
	Boiler room	4	10	0	0
	Grove St.	7	17	0	0
Aug. 4	Screen well	4500	480000	+	+
	Filtered only	4400	8240	+	+
	Boiler room	50	125	0	0
	Rochester St.	57	100	0	0

Results of Mechanical Analysis of Sands After Running Through Washer during Summer, 1912, Somersworth Filter Plant.

	Sample A. (per cent)	Sample B. (per cent)	Sample C. (per cent)
Equal to or coarser than 2.5 m. m.....	5.0	4.0	4.5
Finer than 2.5 m. m.....	95.0	96.0	95.5
Finer than 1.0 m. m.....	63.0	61.0	62.5
Finer than 0.5 m. m.....	22.0	17.0	20.0
Finer than 0.25 m. m.....	5.5	4.5	5.5
Finer than 0.15 m. m.....	0.5	0.5	0.6
Mean effective size, millimeters.....	0.32	0.36	0.33
Coefficient of uniformity.....	3.00	2.72	2.97

*Examination of Water from Well of Great Falls Manufacturing Co.,
Used by Public.*

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10763	1913 Feb 17	None	None	None	0.00	.0060	.0020	.7000	Ft. tr.	8.95	12.4	....	....	0	....

*Examination of Water from Well of Fred Whitehouse, Used by
Public.*

12331	1914 July 3	Sl. opal	White fibre	Sl. foul	0.05	.0006	.0010	.0030	.0000	.55	3.9	0
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*Examination of Water from Well of Mrs. Margaret H. Stanton.**

12506	1914 Aug. 19	None	None	None	0.03	.0008	.0014	1.250	Tr.	5.10	12.0	0
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*The above well is situated near the Dye House, in the thickly settled part of the city, and the water is said to have been used extensively by the mill operatives, being popular on account of coldness and freedom from color, in contradistinction to the city supply, which is highly colored. While this is a fair illustration of the fact that the consumer invariably prefers and expects good appearance in his water supply and that it is folly for any town or company to suppose that the public will permanently accept a highly colored supply, yet in the case of this particular well water, the appearance is deceptive.

Springfield.

Examination of Water from Well of R. L. Heath, Used by Public.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11786	1913 Nov. 20	Consid. opal	Sl. fine	None	0.25	.0010	.0034	.0500	.0000	.05	3.6	....	....	0	....

Stewartstown.—A few families in the village of West Stewartstown are furnished with water by the Consolidated Water Company from springs situated beyond the Canadian line.

Examination of Water from Springs Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
12180	1914 June 1	None	None	None	0.03	.0006	.0014	.0200	.0000	.05	2.9	....	....	0	0

Stratford.—A gravity system from springs operated by the Coös and Essex Water Company furnishes water to North Stratford.

Examination of Water from Supply of Coös & Essex Water Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10944	1913 April 24	V. slight	Sl. silt	None	0.05	.0006	.0010	.0050	.0000	.05	1.7	0	....	0	....
12127	1914 May 15	None	Sl. fine	None	0.03	.0014	.0016	.0030	.0000	.06	1.8	....	...	0	0

Stratford.—*Examination of Water from Bow Lake.*

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10779	1913 Feb. 23	Sl. arom.	V. slight	Fishy	0.15	.0024	.0126	.0025	.0000	.11	0.1	....	....	0	....
10792	Mar. 2	Slight	V. slight	Sl. marsh	0.18	.0026	.0125	.0025	.0000	.11	0.1	....	....	0	....

Stratham.*Examination of Water from Well Supplying School.*

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11331	1913 July 31	None	Mod. coarse floc.	Decid. arom.	0.25	.0010	.0030	.0100	.0000	.85	8.9	....	....	0	....

Sunapee.—The town system (Sunapee village) has its source in Lake Sunapee, the water being pumped to a reservoir of 300,000 gallons. George's Mills is supplied from Ledge Pond.

Examination of Water from Lake Sunapee.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10,963	1913 April 28	V. slight	Sl. fine	None	0.10	.0006	.0064	.0050	.0000	.09	0.3	....	....	0	....
11,724	Oct. 30	V. faint	V. slight	V. slight	0.08	.0006	.0123	.0050	.0000	.09	0.6	....	....	0	....
12,103	1914 May 14	None	V. sl. fine	None	0.12	.0006	.0054	.0030	.0000	.08	0.6	....	....	0	0

Examination of Water from Ledge Pond.

11725	1913 Oct. 30	V. faint	V. slight	V. faint	0.08	.0008	.0134	.0050	.0000	.09	0.6	Tr.	0
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Sutton.*Examination of Water from Wells Supplying Schools.*

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c.c.	10 c.c.
10518	1912 Sept. 30	Slight	Mod. white	Mark earth	0 15	.0010	.0010	.0450	.0000	.20	1.9	....	....	+	...¹
11565	1913 Sept. 9	None	V. slight	None	0 07	.0006	.0050	.0030	V.sl. trac.	.35	2.4	....	....	0	... ¹
11662	Oct. 13	Consid. opal	Consid. earth	Decid. veg.	0 25	.0180	.0114	.0100	Dist. trac.	.20	2.0	....	....	0	... ²

¹ School at South Sutton.² School at North Sutton, new well.**Swansey.***Examination of Water from Well of Swansey School District.*

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c.c.	10 c.c.
11,660	1913 Oct. 9	Mod. opal	Sl. fine	Sl. earth	0.07	.0010	.0014	.0200	.0000	.75	3.5	...	...	0	....

Examination of Water from Well Used at Shop of West Swansey Box Company.

12306	1914 July 1	None	Slight coarse	None	0.05	.0014	.0054	.1000	.0000	.60	4.5	....	....	+	....
12542	Aug. 31	Slight	Slight	Faint earth	0.02	.0002	.0030	.2250	Tr.	.45	5.0	....	....	+	....

Examination of Water from Well of the Snow & Brindell Co.

10,458	1912 Sept. 4	None	V. slight	Sl. earth	0.00	.0005	.0010	.0050	.0000	.20	4.6	.010	....	+	....
10,680	Dec. 18	Mod. opal	None	V. sl. foul	0.05	.0010	.0010	.0025	.0000	.45	3.2	.010	....	0	....

Examination of Water from Well of George E. Whitcomb, Used by Public.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,715	1913 Oct. 24	None	Sl. floe.	Sl. foul	0.05	.0008	.0070	.250	Tr.	1.30	9.0	....	....	+	....
12,212	1914 June 8	None	V. slight	None	0.00	.0006	.0034	.040	.0000	0.90	2.2	....	....	0	....

Tamworth.

Examination of Water from Well of H. L. Wiggin, Supplying Swift River House.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,424	1913 Aug. 11	None	V. slight	None	0.05	.0006	.0010	.0300	.0000	.50	3.2	....	....	0	....

Examination of Water from Supplies owned by S. G. Davidson, Used by Camp.

11173	1913 June 22	Mod opal	V. slight	V. sl. foul	0.10	.0006	.0050	.0050	.0000	.10	2.0	....	....	0	... ¹
11174	June 22	None	None	None	0.05	.0003	.0010	.0100	.0000	.10	1.1	....	....	0	... ²
11175	June 22	None	None	None	0.05	.0006	.0010	.0050	.0000	.05	0.3	....	....	0	... ³
12284	1914 June 19	None	None	None	0.00	.0014	.0078	.0030	Hi'h	.18	2.0	...	....	0	... ³
12285	June 19	V. sl. opal	None	None	0.00	.0010	.0010	.0030	Ft. tr.	.07	2.0	....	....	0	... ³
12286	June 19	None	None	None	0.00	.0006	.0014	.0200	.0000	.08	0.4	....	....	0	... ²

¹ Reservoir.

² Spring.

³ Well

Thornton.

Examination of Water from Spring of L. N. Brown, Supplying Mt. Kineo House.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,378	1913 Aug. 7	None	None	None	0.05	.0006	.0006	.0025	.0000	.03	0.1	.050	....	+	....

Tilton.—A gravity system operated by the Tilton & Northfield Aqueduct Company furnishes water to the villages of Tilton and Northfield from Chestnut Pond.

Examination of Water from a Faucet of the Tilton & Northfield Aqueduct Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,044	1913 May 21	Slight	Sl. fine	Sl. arom.	0.20	.0010	.0080	.0050	.0000	.05	0.3	....	....	0	....
11,776	Nov. 19	Sl. opal	V. slight	Sl. earth	0.12	.0008	.0084	.0050	.0000	.09	0.3	....	....	0	0
12,184	1914 June 2	V. slight	Shght floc	V. slight	0.15	.0010	.0079	.0030	.0000	.09	0.1	....	....	0	+

Troy.

Examination of Sources Under Consideration for a Public Supply System (see Special Report elsewhere).

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,019	1913 May 15	Slight	Sl. floe.	V. slight	0.35	.0010	.0060	.0050	.0000	.10	0.1	....	....	0	1
11,020	May 15	Slight	Mod. br. floe.	Sl. swamp	0.55	.0006	.0128	.0050	.0000	.05	0.1	....	....	0	3
11,021	May 15	V. slight	Sl. floe.	Sl. swamp	0.40	.0010	.0070	.0050	.0000	.07	0.1	....	....	0	3
11,022	May 15	V. slight	Sl. floe.	None	0.70	.0006	.0030	.0050	.0000	.05	0.1	....	....	0	4
11,035	June 1	V. slight	Sl. floe.	Sl. marsh	1.30	.0010	.0110	.0025	.0000	.05	0.1	....	....	0	5

¹ Whitcomb Brook.² Raitikan Brook.³ Mitchell Brook⁴ Fassett Brook.⁵ Dexter Brook

Examination of Water from Well of Troy School District.

11566	1913 Sept. 8	Slight	Very slight	None	0.10	.0010	.0010	.7000	Dst. tr.	.80	4.0	0
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Wakefield.—A system owned by the railroad company furnishes water from the river for stores, town buildings and railroad station. The analyses here appended is indicative of a polluted condition.

Examination of Water from Railroad System.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11775	1913 Nov. 19	Slight	Slight floe.	Earthy	0.25	.0020	.0088	.0100	.0000	.40	1.7	....	....	+	+

Examination of Water from Well of Wakefield Slipper Company.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11643	1915 Oct. 2	None	Consid. ferrug	Slight	0.15	.0010	.0010	.050	Tr.	1.75	7.9	....	Con- sid.	+	....

Examination of Water from Well owned by Congregational Church.

11768	1913 Nov. 13	H. opal	Consid. earthy	Decid. veg.	0.40	.0050	.0194	.010	Tr.	0.45	3.9	+
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Examination of Water from Well of A. D. Hill, Supplying The Colonial.

11,413	1913 Aug. 13	None	None	None	0.00	.0034	.0030	.3000	.0000	2.90	4.6	0
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Examination of Water from Well of Philip Garvin, Used by Public.

12,445	1914 Aug. 5	None	V. sl. floc.	None	0.00	.0010	.0030	1.0000	h'gh	7.40	5.9	0
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Examination of Water from Well of George Hodsdon, Used by Public.

12,499	1914 Aug. 19	V. slight	V. slight	Dist. veg.	0.05	.0010	.0010	.0000	.0000	.55	1.9	0
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Walpole.—The Walpole Water and Sewer Company operates a gravity system from an impounded stream.

The North Walpole supply is derived from springs.

Examination of Walpole Water Supply.

Number	Date of Collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Alkalinity	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c.c.	10 c.c.
11050	1913 May 21	None	None	None	0.05	.0010	.0020	.0050	.0000	.12	2.3	....	....	0	....
12296	1914 June 27	None	None	None	0.10	.0006	.0044	.0030	.0000	.08	2.5	....	....	0	0

Examination of Water from Supply of North Walpole.

11028	1913 May 20	Ft. opal	None	None	0.05	.0006	.0040	.0050	.0000	.15	2.0	.010	....	0	....
12268	1914 June 25		None	None	0.00	.0008	.0020	.0030	.0000	.18	1.5	.015	....	0	+

Warner.—The village fire district system is from springs and a brook. A recently drilled well is in reserve for emergency use.

Examination of Water from a Faucet of the Village District Supply.

Number	Date of Collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c.c.	10 c.c.
11130	1913 June 11	Slight	Mod. sl. flocc.	Slight	0.20	.0010	.0044	.0050	.0000	.04	0 1	....	Slight	0	....
11179	June 24	V. slight	V. slight	Sl. foul	0 05	.0010	.0010	.0050	.0000	.12	2.7	....		0	... ¹
12344	1914 July 9	V. slight	Slight	Sl. earth	0.22	.0006	.0062	.0030	.0000	.04	0.4	....		+	+
12452	July 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0

¹ New artesian well.

Warren.—The H. N. Merrill Water Works furnishes water from springs and from a drilled well 474 feet deep.

Examination of Water from Brook Used by Public.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11778	1913 Nov. 18	None	None	None	0.15	.0010	.0034	.0200	.0000	.08	0.7	.....	.....	0	0

Weare.*Examination of Water from Well owned by Baptist Society.*

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
12305	1914 July 1	Sl. opal	V. sl. flocc.	V. slight	0.05	.0020	.0014	.0050	.0000	.90	1.9	.015	...	0	....

Webster.*Examination of Water from Well of S. Godfrey, Supplying Cloverdale Farm.*

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11304	1913 July 25	None	V. slight	Sl. veg.	0.05	.0040	.0060	.2500	High	.95	3.2	.....	.....	+	....

Examination of Water from Spring of F. V. Thompson, Supplying Breezy Hill Farm.

11306	1913 July 25	Heavy opal	V. Slight	Sl. earth	0.10	.0006	.0010	.0025	.0000	.08	2.0	.020	+
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Wentworth.

Examination of Water from Spring of Virgil Prettyman, Used by School Camp.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
12242	1914 June 6	None	Sl. coarse	None	0.00	.0008	.0018	.0030	.0000	.20	2.4	....	....	+	....

Whitefield.—The town system has its source in a mountain brook.

Examination of Water from Town Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11056	1913 May 27	Slight	Mod. fine	Sl. veg.	0.07	.0006	.0080	.0025	.0000	.05	0.3	....	....	0	....
12178	1914 June 2	None	Sl. gray floe.	None	0.10	.0026	.0044	.0070	.0000	.07	0.2	....	....	0	0

Wilton.—Source of town system, Gaerwin Falls Brook, with storage and reserve in Burton Pond. (See special report elsewhere.)

Examination of Water from Wilton Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10820	1913 Mar. 18	V. slight	None	Sl. swamp	0.25	.0010	.0065	.0025	.0000	.15	0.3	.050	....	0	....
10850	April 2	V. slight	None	Earth	0.35	.0010	.0084	.0050	.0000	.16	0.1	.030	....	0	..
10931	April 21	V. slight	None	Earth	0.35	.0010	.0050	.0050	.0000	.15	0.1	....	....	0	....
11257	July 17	None	V. slight	Ft. earth	0.08	.0006	.0016	.0050	.0000	.15	0.3	....	....	0	+ ¹
11258	July 17	Consid. fine veg.	Sl. gelat.	Dist. swamp	0.45	.0006	.0200	.0050	.0000	.15	0.3	....	....	0	+ ²
11318	July 29	Mod. fine	Mod. fine veg.	Mark. arom.	0.60	.0010	.0190	.0050	.0000	.14	0.3	....	....	+	...³
11319	July 29	Mod.	Mod. fine veg.	Sl. arom.	0.55	.0010	.0180	.0050	.0000	.14	0.1	....	....	+	...³
11490	Aug. 26	V. slight	None	Decid. veg.	0.35	.0010	.0090	.0050	.0000	.12	0.3	....	....	0	....
12183	1914 June 4	None	None	Sl. swamp	0.35	.0010	.0068	.0030	.0000	.11	0.3	....	....	0	+

¹ Stockwell Brook. ² Burton Pond.³ From reservoir, mainly Burton Pond water.*Examination of Water from Well of Wilton School District.*

12079	1914 May 4	None	None	Ft. sweet	0.00	.0008	.0016	.3500	.0000	.40	3.2	.040	0
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Examination of Water from Well of Jennie M. Hobbs, Used by Public.

10,491	1912 Sept. 13	None	None	Sl. veg.	0.05	.0030	.0064	.2500	h'gh	4.76	6.6	+
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Examination of Water from Well of D. Whiting & Sons, Used by Public.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
10762	1913 Feb. 18	None	None	None	0.00	.0010	.0020	0.750	.0000	1.10	4.6	.050	....	0	....

Winchester.

Examination of Water from Well of C. E. Hildreth, Used by Public.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
12467	1914 Aug. 12	None	None	None	0.00	.0004	.0010	.0100	.0000	.10	1.1	....	....	0	....

Windham.

Examination of Water from Well of Mrs. J. A. Leavitt, Supplying Elm Knoll.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11,308	1913 July 28	None	V. slight	None	0.05	.0006	.0016	0.00	.0000	.45	7.4	...	....	+	....

Examination of Water from Well of Mrs. H. W. Gilson, Supplying Echo Farm.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11309	1913 July 28	Mod. opal	Mod. flocc.	Dist. foul	0.35	.0100	.0050	.0100	.0000	.80	8.1	..	...	0	....

Examination of Water from Well of Frank Jewett, Supplying Jewett Farm.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11311	1913 July 28	None	V. slight	Sl. earth	0.00	.0010	.0016	.2500	High	.55	4.7	....	....	0	....

Examination of Water from Well of Mrs. G. H. Peters, Supplying The Brookside.

11312	1913 July 28	None	None	None	0.05	.0006	.0010	.0100	.0000	.12	1.6	+
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Examination of Water from Well of G. E. Jackson, Supplying Elm Farm.

11313	1913 July 28	V. slight	V. slight	None	0.10	.0010	.0120	.3000	.0009	3.15	6.0	0
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Wolfeboro.—The town system (gravity) has its source in a pond of three hundred acres.

Examination of Water from Public Supply.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11 083	1913 June	Sl. opal	Sl. white	Sl. veg.	0.07	.0010	.0090	.0050	.0000	.11	0.3	....	....	0	....
12,294	1914 June 6	V. slight	Sl. fine	Earthy	0.07	.0010	.0104	.0030	.0000	.11	0.4	....	....	0	0

*Examination of Water from Well owned by Boston & Maine Railroad.**

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11767	1913 Nov. 13	None	None	None	0.03	.0010	.0018	.3000	.0000	2.95	4.6	....	....	0	....

* The train supply is taken from the town system.

North Woodstock.—A system owned by the village of North Woodstock has its source in a brook.

Examination of Water Supply of North Woodstock.

Number	Date of collection	Appearance				Ammonia		Nitrogen as		Chlorine	Hardness	Lead	Iron	Colon Bacilli	
		Turbidity	Sediment	Odor	Color	Free	Albuminoid	Nitrates	Nitrites					1 c. c.	10 c. c.
11025	1913 May 21	V. slight	None	None	0.45	.0010	.0090	.0100	.0000	.05	0.1	....	....	0	....
11473	Aug. 22	Slight	V. slight	None	0.45	.0010	.0080	.0025	.0000	.05	0.1	....	....	0	....
12236	1914 April 18	None	None	None	0.35	.0008	.0069	.0030	Trace	.07	0.1	....	..	0	0

Examination of Ice Supplying Boston & Maine Railroad.

12253	1914 June 18	V. slight	Sl. fibre	None	0.00	.0006	.0012	.0030	.0000	.04	0.0	0
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Examination of Water from Well Owned by Bell Estate, Supplying Deer Park Hotel.

11519	1913 Aug. 28	Sl. fine	Mod. earth	Mark arom.	0.18	.0026	.0030	.010 ⁰	Trace	.23	1.7	0
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**Reports and Recommendations Relating to Various
Water Supplies as Submitted by the
Chemist of the Board.**

SPECIAL REPORTS RELATING TO WATER SUPPLIES.

HUDSON.

The following opinion as to the character of the well water supply of the Hudson Water Company was furnished to the Public Service Commission in connection with a petition from the Hudson consumers. (See page 151, Rep. 1911-12.)

*Public Service Commission,
State House, Concord, N. H.*

APRIL 23, 1913.

GENTLEMEN:—Concerning the present quality of the well water supply of the Hudson Water Company, I am enclosing sheet giving analytical data, tabulated to allow of comparison, and would offer the following comments:

Samples were collected March 27 by a representative of this department from all three of the sources involved. As, previous to this collection there had been much heavy rain, another set of samples was taken on April 8. The examinations, however, indicate no very marked differences between the two collections. In fact, the composition of the water from all three sources is practically the same.

In general it may be stated that the analyses all indicate water of satisfactory quality. Those of March 27 represent water quite above criticism in every way, with the sole exception that both of the large well samples deposit a slight but distinct stain consisting of iron in combination with traces of organic matter. In the later samples, this stain is not present at all, and the organic matter is evident in the slightly increased values for albuminoid ammonia.

While it is therefore quite probable that in time this water—at least from the large wells will deposit an iron stain on fixtures with which it comes in contact, this would seem to be about the only serious criticism that can be urged against the supply, as otherwise, so far as our analyses indicate, it compares not unfavorably as to quality with that of the Pennichuck supply.

As regards the actual quantity of iron present, the figures given represent but a trace, the amounts being within the limits ordinarily recognized in connection with potable waters. Yet, small as it is, it is not difficult to appreciate that such iron content might be a source of annoyance in some instances, though probably not in any general way. While the driven well water seems to carry no iron at present, our experience is that this mineral is liable to appear in time.

HUDSON WATER WORKS.

Analyses of Samples from Wells.

(a)

Examination of samples collected March 27, 1913, by Mr. W. L. Adams, from wells (1) and (2) and new driven well supply. Samples taken following 36 hours heavy rain.

	Well No. 1	Well No. 2	Driven Wells
	10836	10835	10837
Odor	none	none	none
Color .....	.05	.07	.07
Turbidity .....	.10	.10	.10
Sediment	v. sl.	v. sl.	v. sl.
Free ammonia.....	.0010	.0014	.0006
Albuminoid ammonia...	.0010	.0010	.0010
Nitrates .....	.005	.005	.003
Nitrites .....	.0000	.0000	.0000
Chlorine .....	.34	.28	.32
Solids	5.3	4.3	4.5
Hardness	1.4	0.9	1.4
Colon bacilli.....	absent	absent	absent

(b)

Samples collected by the superintendent, April 8, 1913:

	10872	10873	10874
Odor	sl. earthy	sl. earthy	dist. earthy
Color .....	.05	.05	.05
Turbidity .....	.10	.10	.25
Sediment	v. s. gray flocc.	sl. gray flocc.	v. slight gray flocc.
Free ammonia.....	.0010	.0010	.0010
Albuminoid ammonia...	.0036	.0040	.0030
Nitrates .....	.005	.005	.005
Nitrites .....	.0000	.0000	.0000
Chlorine .....	.27	.35	.36
Solids .....	.....	.....	.....
Hardness	1.5	1.4	1.8
Iron	0.015	0.025	0.00
Colon bacilli.....	absent	absent	absent

In table (a), samples 10836 and 10835 deposit a slight film or stain of *iron* on the bottom of the bottle, on sanding a day or two; this did not occur with the two corresponding samples of April 8. The driven well water seems to be virtually free from iron.

DERRY.

An examination made June 17, 1913, of the Derry water supply system revealed the following facts:

It appears that until about six years ago this supply was derived mainly from a series of about thirty driven wells, sunken in low ground near the confluence of Horn and Beaver Brooks, southwest of Derry Depot. At this time there was, however, so it is said, frequent resort to direct pumpage from Beaver Brook, which is a stream flowing from Beaver Pond and skirting the eastern edge of the principal village. The latter source being sewage-polluted, and the driven wells becoming clogged and failing to furnish an adequate supply, the latter were eventually entirely abandoned and a supply secured through the construction on the same site of five large dug wells. In addition, an emergency intake is retained in Beaver Brook in the rear of the pumping station, from which stream condensing water for operation of the pumps is also secured. It was represented that this emergency intake has not been opened since 1909, during the occasion of a fire. At this time, it is said, numerous cases of bowel disturbance arose among the water users, as might be anticipated, in view of the pollution to which this stream is subject.

Two of the present wells are located on the west side of the roadway, across from the pumping station. No. 1, the larger, is 25 feet in diameter and 14 feet deep, No. 2 being 14 feet in diameter and 11 feet deep. The latter is less than 100 feet from the brook. The three wells on the other (east) side of the street are of square construction, the dimensions being: No. 3, 16 feet square, No. 4, 14 feet square, and No. 5, 6 feet square, all being approximately 11 feet deep. No. 4 is but 80 feet, approximately, from the brook. All of these wells are tightly covered, and are so cemented and provided with raised curbs as to exclude any direct influx of surface water.

At this point, opportunity may be taken to express criticism of the general plan of this system. This is based upon the fact that the town is doing no less than both drawing its water supply and disposing of its sewage in the same locality—practically in the same spot. While Derry is at present at a considerable disadvantage in that it has no regular system of sewerage, yet the sewage from a number of factories and tenements, as well as that from the buildings along a portion of the main street, is conducted in a sewer to the banks of Horn Brook at a point some distance above the pumping station, thence along the west bank to a point about 700 feet below the nearest well, where it is discharged into the brook. At times, it is said, the height of the water in the brook is such as to cover the pipe, and as leaks have occurred in the latter, more or less sewage from this source is liable at times to find its way into the brook.

This, however, is possibly the least of the contamination which this brook receives, and it should be noted that the stream above its union with Beaver Brook is but a small one, incapable of properly caring for any extensive influx of sewage. For half a mile or more above such junc-

tion at the pumping station the flow of Horn Brook is through the most thickly settled portion of the town, and receives the drainage from numerous dry closets, cesspools and sink-drains, as well as the wash from littered back yards, pigpens, etc. At one point, a stream of wash-water from a laundry was observed pouring directly into the brook.

However, this also is but a smaller part of the contamination to which this brook is subjected. At a point about a half mile above the pumping station a voluminous discharge of leather-board waste was found entering the brook from the factory of the Walton Shoe Company. At this place a large pile of such waste was observed standing partly in the brook, although the latter at this place is but a few inches deep and probably between two and three yards wide only.

The result is that Horn Brook, by the time it discharges into Beaver Brook at the pumping station, is but little better than an open sewer. Its appearance is that of a black hog-wallow, while the sewage stench, faintly though distinctly noticeable at the time, is said to be very pronounced in dry weather, when the brook is lower than at present. At such times the odor is materially augmented by that from the sewage discharged in the main brook just below the wells.

Aesthetic considerations would condemn such an intermingling of sewage odors with the sources of water supply. Granted, however, that such odors cannot of themselves actually injure the quality of the water, yet that the close proximity of sewage to the wells leaves its mark upon the character of the water is evident from the series of analyses of this supply, representing samples collected since January, 1906, down to the present time. (See various reports of this Board.)

The factor most significant of the influence of the nearby sewage upon the character of this water is the chlorine content. This, as will be observed, not only fluctuates through a wide range—much wider than is true of any of our normal public supplies—but the actual amount is materially above the normal for pure water for this locality (0.18). Thus in March, last, the chlorine reached the highest point thus far observed (1.40), notwithstanding that during the period represented it has been as low as .25. In general, the chlorine data seem to denote a progressive tendency upward. Another figure that is eloquent of the pollutive influences to which this water is subjected is the nitrate content. Although not much above normal of late, the amount has in times past greatly exceeded such, the highest observed figure being 0.350, or at least seventy times as much as the majority of our public supplies will show. The water representing these relatively highly nitrated samples could scarcely have been taken direct from the brook, as the nitrogen content of the latter would be chiefly of a lower form of oxidation.

The loose, gravelly soil, however, in which these wells are constructed affords excellent means for self purification of the seepage water from the brook, through the influence of the nitrifying organisms naturally present. That such soil is acting as a sewage filter, not only in some degree all the time, but at certain periods in a very extensive way, is apparent not only from the above analyses but from the allegation that the plot on which

these wells are located is inundated from the brook nearly every year—a statement that finds ample corroboration in the numerous bits of leather-board scrap to be found in the grass about the wells. This water is clear, tasteless and most of the time of good appearance, and no doubt the people of Derry may believe they have a superior supply. Physically considered, this is true; yet there is no escaping the fact that there is an element of danger attached to it. The security of the community from a water-born epidemic is measured directly by the capacity of this natural filter to continue its present efficient service. On account of the more or less intermittent character of its action, this may continue for years; yet the fact must not be lost sight of that no filter can be depended upon to render effective service indefinitely, without proper renewal or attention. Sooner or later the time is liable to come when polluted water will reach the wells, and if this combination of circumstances should include that of typhoid dejecta in the sewage at the time in question, then an epidemic would obviously result, as it did recently in the cases of Somersworth and Durham during a similar combination of circumstances.

In this connection, as showing the progressive nature of the pollution of Horn Brook, the following analyses of samples collected June 18 are of interest: No. 1 is from Horn Brook, taken near the roadway just above the upper pond. At this point the brook doubtless receives a little wash from farm land, though this would not be true a little further above. No. 2 was taken from dam at the Walton Shoe Shop; No. 3, from a point just below the lumber mill and a short distance above the union with Beaver Brook. No. 4 was collected from Beaver Brook at the emergency intake in the rear of the station.

	No. 1.	No. 2.	No. 3.	No. 4.
Odor	ft. earthy	decided	marked foul	aromatic
Color	0.08	1.40	2.00	0.45
Turbidity	v. slight	v. slight	heavy	slight
Sediment	sl. flocc.	sl. gelat.	h. gelat.	sl. flocc.
Free ammonia.....	0.0010	0.0020	0.0024	0.0026
Albuminoid ammonia..	0.0034	0.0290	0.0410	0.0190
Nitrates	0.010	0.010	0.015	0.010
Nitrites	0.000	0.000	0.000	0.000
Chlorine	0.27	0.27	0.65	0.25
Hardness	1.2	0.7	1.9	1.1
Colon bacilli (icc.)....	faintly positive	positive	str. posi- tive	positive

The features of interest in connection with the above data are color, sediment, odor, albuminoid ammonia and chlorine; also the colon finding. No. 3 is similar in some respects to a weak sewage; in fact, the decomposing leather-board waste causes it to look much worse than the average sewage. Although No. 2 was collected at the dam, a few feet above the present point where leather-board waste is discharged, the color and organic content is very high, and would suggest that considerable waste is also being discharged in the pond, as well. Aside from a faint reaction for colon

bacilli, No. 1 represents good water, and it is probable that by going a little farther up the brook, water of excellent character might be secured. It was a mistake not to have located the pumping station here rather than where it is.

Horn Brook is not only a constant and increasing menace to the present water supply of Derry, but, in my opinion, it constitutes in its present condition a decided public nuisance. We are informed that previous attempts to have this brook cleaned up have failed, for certain reasons. However, any attempt of this sort should not stop at exclusion, merely of the manufacturing sewage. Not only should the leather-board waste be denied discharge in this brook (such waste might easily be dried and burned), but the entrance of sewage of any sort should be forbidden, as should also be forbidden the dumping of refuse of any description whatever in or along its banks, within the compact part of the village.

JULY 1, 1913.

DOVER.

Question having arisen as to the propriety of the establishment of a cemetery in the vicinity of Willand Pond, one of the sources of water supply for the city of Dover, an examination was made July 25, 1913, of the situation by the chemist of the Board, who reported as follows:

The tract in question is located west of the pond, the distance from the nearest water edge to the fronting highway fence being stated as 1,225 feet. As it is claimed that a depth of 200 feet from the highway is to be reserved for building purposes, this would therefore make the distance from the pond to the nearest line of graves 1,425 feet. The total highway frontage is approximately 1,200 feet. The soil consists of sand underlayed by gravel. The rear half of the tract slopes in the opposite direction, and there are no "runs" leading from this vicinity to the pond. The land intervening between the plot and the pond slopes very gradually toward the latter, in fact, presenting to the eye a practically level appearance. Such intervening land is traversed by two highways.

While from the testimony adduced there can be little doubt that the general trend of the ground water current is toward the pond, yet I am of the opinion, from a consideration of all the facts, that any danger of contamination of the pond supply from such a source is so extremely remote as to be negligible. In fact, it might be pointed out that far more dangerous sources of possible contamination already exist much nearer the pond.

SOMERSWORTH.

The following report and recommendations are submitted relative to an inspection made December 9, 1912, of the plant of the Somersworth Water Works. The latter includes a pumping station and filtration plant located two miles northeast of the city. The water is taken from the

Salmon Falls River, is passed through a filter bed, and is pumped thence to a covered, steel standpipe:

The filter, which was among the first to be constructed in this country, and the second one in this country of the covered type, was completed in 1897, following the selection of this river supply as a result of the failure of a driven well project. Except for the cover, its design follows closely that of the original construction of the famous Lawrence, Mass., filter—the first high efficiency plant in America, installed in 1893.

In order that the subsequent criticisms and recommendations may be more clearly understood, a brief description of the Somersworth plant is here given.

Like the original form of its prototype, this plant still includes but a single filter bed. As was soon discovered at Lawrence, and there early rectified, this arrangement is not only highly inconvenient as regards cleaning, etc., but renders the maintenance, at all times, of a properly purified water supply a very difficult, if not an impossible, matter.

The intake of the system is 18 feet off shore, at a depth of six feet below mean water level. The water flows by gravity, through a 16-inch iron intake pipe, to the "screen" or settling well 34 feet from shore. This well is eight feet in diameter, and is divided by a double screen septum, for the separation of any coarse materials. On December 9, this well contained eight feet of water. Leading from the screen well are two gate-controlled 16-inch pipes, one of which, for emergency use, runs direct to the pump well in the station; the other serves to convey water to the filter bed. Before entering the filter, the latter pipe splits into a Y of two 12-inch branches. These terminals enter "pockets" built into the filter wall on the sand level, each 12 feet long, by 25 inches high, by 12 inches deep, and provided with flash boards, thus permitting the water's reaching the bed in two very broad, shallow streams, and thereby avoiding disturbance of the sand stratum.

The filter bed is rectangular, 148 feet x 150 feet, equivalent to an area (after deducting for area of roof-supporting piers) of exactly one half acre. The floor is on natural gravel and ledge, $8\frac{1}{2}$ feet below mean river level. The walls are of concrete masonry, and are quite vertical, without the "breaks," or projecting ledges, now considered desirable for the avoidance of direct passage of the water between the walls and the sand stratum.

The roof is supported on groined arches of brick and concrete, the earth covering, amounting to $2\frac{1}{2}$ feet at center, sloping slightly at sides to facilitate drainage. The interior is reached through a series of double covered manholes.

The collection drains, sunken in the floor of the filter, consist of a single main traversing the center in a southwesterly direction, and a series of laterals. The main terminates in the 16-inch pipe that carries the water from the filter bed to the regulating well, or chamber.

The total depth of the filter bed, as originally constructed, was five feet, including one foot of assorted gravel underlying four feet of sand. Tests made with an iron bar at the time of my visit indicated a very nearly normal depth of sand. The "effective size" of sand used is reported as

ranging from .30 to .45 millimeter. Analysis of a sample of the washed sand, taken December 9, showed an effective size of 0.33 millimeters, with a uniformity coefficient of 2.97. The latter is a very wide ratio, and serves to explain, in a measure, the long working capacity of this filter. The size of grain, however, while somewhat larger than that at Lawrence, is about that commonly used elsewhere. At intervals, the dirt surface film of the bed is scraped up into piles, whence it is conveyed by an ejector to the surface, and, later (during the summer) is passed through a sand washer, this cleansed sand being returned to the bed once each year.

The regulating chamber referred to, located at the lower extremity of the filter nearest the pumping station, consists of a covered well divided into two sections, one section receiving the water from the filter, the efflux of which is controlled by a gate and special mechanism. This section is also provided with a centrifugal pump, connected with a 10-inch waste pipe leading back to the river, the object of the latter being to permit of the draining of the filter bed for cleaning, etc.

The second section communicates both with the first, and with the direct main from the screen well, and from this section the filtered water flows by gravity to the pump well in the station, from which it is pumped to the standpipe. The latter is 95½ feet high and 40 feet in diameter, with a capacity of 902,147 gallons.

The level of the water upon the filter is dependent upon the level of the water in the river, varying from 4 to 6 feet. This allows of a rather unusual "head," the depth at Lawrence generally not much exceeding 3½ feet.

The present daily pumpage is given as 500,000 to 600,000 gallons, a filtration rate per acre of somewhat over 1,000,000 gallons. This is a low rate, as with care and favorable conditions, over 3,000,000 gallons can be safely filtered in a plant of this type. This low rate, combined with the "head" available, doubtless also serves to explain why it has been possible to prolong the cleaning periods so much beyond the normal. On the other hand, as offsetting the advantage of low rate and great attainable head, there has been much complaint of the sludge discharged into the river from the leatherboard factories above. It is represented that in the past this sludge, consisting of iron oxide, lampblack, and vegetable fibre, has collected in great quantities upon the filter surface, where it formed an almost impenetrable layer.

At present, following the installation of the sludge tanks, it is certain that there is very much less sediment coming down the river than formerly, although the superintendent claims that this is still causing considerable trouble at times; but on the date in question the appearance of the river gave no special evidence of foulness, neither did the surface film on the filter, which latter represented a discoloration of the sand through about a half inch, resulting from an accumulation period of about forty days,—the filter having been last scraped and the washed sand replaced on October 30.

The previous cleaning was done in April, involving the very unusual interval of six months, as against the average interval elsewhere of about

one month. In cleaning, the customary removal is one-half inch to three-fourths inch of sand. Here, the removal is stated as being not less than two inches, and running up to as much as four or five inches in places.

In considering this matter of surface accumulation, it needs to be distinctly understood that a certain thickness of "dirt" film is absolutely essential to a proper degree of efficiency. It is a well-known fact that for the first day following cleaning, the bacteriological efficiency is very low indeed, and for a few hours, at least, little or no safety is afforded. On the other hand, there is room for some question if it is entirely safe or well to allow the accumulation to continue through such a long interval as above, involving, as it does, the removal and attending disturbance of several inches of sand at one time.

However, in this case, as with the cleaning of the filter, it is necessary to emphasize the distinct advantage that the Lawrence plant now possesses over the one in question. While the former now has four independent beds, the low efficiency temporarily resulting from the cleaning of one of these is compensated for in the fact that the output is diluted by that of the other three—whereas, in the Somersworth case, such low efficiency affects *all* water pumped to the standpipe during the interval in question.

Again, there is a further dilution in the first case, in that Lawrence has a storage capacity of ten times its daily pumpage; while that of Somersworth is less than double.

For the above reason, when the filter is cleaned it is necessary to hurry the work through in less than twenty-four hours, always with the risk of a serious fire at this juncture necessitating the opening of the direct gate from the river to the pump well. Then, too, when water is finally applied to the newly cleaned filter, the period either of quiescence or of very low initial "head," customary at this point, cannot be maintained as long as is desirable, with the limited storage capacity.

The remedy is in the construction of a partition wall so as to divide the present bed into two. This would allow of one filter being in operation, affording sufficient water for the normal demand, while ample time would be allowed to clean the second bed—not only as thoroughly, but as frequently as desirable. In this way the danger of infecting the supply with sewage-polluted, incompletely filtered river water would be greatly reduced. At present, the chance of such infection, following the filter cleaning, is very considerable.

The construction of such a filter wall presents two problems. The first involves mainly the difficulty and expense attendant upon the relocation and construction of an additional trunk line drain in the floor of the filter. The second has to do with ways and means of getting pure water during the interval while the filter bed would be out of commission. At Lawrence, this problem was not involved, because of the ample reserve.

The solution I would suggest for the latter would be in the installation of an equipment for applying the hypochlorite treatment. In this way water could if necessary be introduced directly from the river, and the treatment at this point would render it safe, although the mechanical straining out of the excess of sediment would, of course, be wanting—a minor

consideration for temporary purposes. Such a sterilization plant, being inexpensive, might well be made permanent, for emergencies. For treatment of the water following the filter cleaning, it might also be considered as an alternative to the subdivision of the filter, although the latter would probably be preferable in the end, while the former would not solve the problem of more ample time for cleaning.

Another improvement which is to be recommended is an increase in the size of the screen well. This is but eight feet in diameter, and, as the superintendent states, the water much of the time flows through immediately, allowing scarcely any interval for subsidence. Yet, even as it is, this well has to be cleaned frequently. When the plant was constructed, this was not a serious matter. The installation of a sedimentation basin several times the size of the well would prove of very great advantage. While this recommendation may not seem to be wholly consistent with the present long interval between cleanings, still I am convinced that such an enlargement would greatly facilitate the proper working of the filter. An enlarged area here would not only allow the removal of much of the suspended matter which must now necessarily go on to the bed, but the preliminary bacterial purification, through sedimentation, would be appreciable.

In connection with the construction of the latter, the color feature of this supply should be considered. This river water is normally quite highly colored. The ordinary filtration process removes but little of such color, and the residual color is greater than any community should be contented to remain permanently satisfied with.

So long as the city is going to the expense of subjecting its water supply to purification at all, it should go all the way while it is about it. The chemical treatment of raw river water at a properly enlarged and constructed sedimentation basin would not involve an unwarrantable expense in addition to the present cost of filtration, and such treatment could be made to produce a water of crystal whiteness.

This report includes rather frequent comparison of the plant in question with that of Lawrence. Incidentally, the city of Somersworth is to be congratulated upon the fact that the designer of this plant was able to profit by the Lawrence experience. The latter city has to sustain a very heavy annual expense in connection with the removal of ice from the original uncovered filters—an experience which Somersworth has wholly avoided.

Following is a summarized statement, with recommendations:

1. Because of the sewage-polluted condition of Salmon Falls River, involving the chance of frequent presence of typhoid bacilli, it is indispensable that there be no disturbance of the efficiency of filtration.
2. Under present conditions, immediately following the cleaning or renewing of the filters, there is, necessarily, serious disturbance of efficiency, extending from a few hours up to possibly a number of days.
3. To correct this at present unavoidable circumstance, the present filter bed should be subdivided, and the divisions then cleaned somewhat more frequently than at present.

4. In order to effect this subdivision, the installation of an equipment at the pump well, for the application of the hypochlorite treatment, will be required. I would urge the extreme desirability of such being installed any way and at once for the purpose of rendering safe the effluent following the next filter cleaning.

5. The present screen well ought to be enlarged to a number of times its present size, in order to allow preliminary purification and the elimination of suspended matter.

6. At the time such an enlargement is effected, consideration should be given to the installation of a coagulating equipment, affording means for the removal of color.

7. So far as can be found, the filter plant is being conducted in a capable manner. What is needed for a greater degree of efficiency is the improvement suggested. And, in turn, this should not be construed as reflecting upon the designer of the plant, for the reason that at the time of installation filtration processes were not perfected to their present degree.

8. Under normal conditions of filtration, the system should furnish a supply that is safe and suitable for drinking purposes,—aside from the single feature of the color present, which is an unattractive although harmless characteristic. The adoption of the improvements suggested should insure a supply that would be entirely safe and dependable at all times.

Respectfully submitted,

CHAS. D. HOWARD,
Chemist.

DECEMBER 14, 1912.

Subsequent tests have indicated a very low degree of efficiency for the filter alone. Unquestionably, the construction of the dividing wall and more frequent cleanings, as recommended in the above report, are essential for any really satisfactory operation. At this date, however, neither recommendation has been adopted.

CHLORINE TREATMENT AT SOMERSWORTH.*

In view of the deficiency already referred to, a process of treatment of the filtered water involving the use of liquified chlorine gas was however placed in operation March 15 of this year. The results afforded by this process, the second of its kind ever installed for regular use, have been satisfactory. Although almost untried at the time of its installation (and, in fact, certain minor improvements and changes have since been effected), yet that it affords a thoroughly practical method of disinfection is believed to have been demonstrated. Furthermore, the process offers certain advantages over the hypochlorine treatment, the only serious disadvantage over the latter being the present greater cost, and, as will be seen, this is more

*A similar system has recently been adopted for treatment of the Woodsville supply.

apparent than real. It is believed that ultimately this method will very largely, if not entirely, supplant the use of bleaching powder for the purpose of water purification.

The installation is compact and simple, consisting of the cylinder of liquefied gas, from which the chlorine is delivered through a pressure-regulating and feeding device to an absorption tower, the aqueous solution here formed being thence discharged into the pump well.

The regulating and feeding device is obviously the vital part of the equipment, the perfection of which has involved a great deal of experimentation. After passing the right hand gauge (see cut), which registers cylinder pressure, the gas encounters a regulating device, or "transformer," which serves to reduce this pressure to a predetermined maximum. This, in conjunction with a second regulating valve, ensures the delivery of a constant uniform flow of gas irrespective of fluctuations in temperature and pressure at the cylinder, and such flow can be regulated and registered on the chlorine gauge for any desired weight delivery per hour. Since the installation, the company has made certain alterations in this part of the apparatus, and it is now claimed that the discharge as set on the gauge can be depended upon as being constant and accurate within reasonable limits. Unfortunately, the equipment as originally installed made no provision to allow of drawing off analytical samples of the gas solution as delivered into the well. However, a satisfactory check upon the indicated deliveries is afforded by the total weights of gas consumed. An additional check might be secured by balancing the gas cylinder upon scales.

Brass tubing, with lead-packed connections, is employed for conducting the gas to the absorption tower. The latter consists of a section of soil pipe filled with broken pumice stone and through which from the top a small stream of water is allowed to descend. Dry chlorine gas has no action upon brass, but in the presence of moisture it is highly destructive, hence there are elaborate precautions to prevent any back current of moisture toward the cylinder. For conveying the gas solution to the well, hard rubber pipe encased in iron pipe is used.

The following data show the actual and indicated rates of consumption and treatment during the past six months, together with the cost of such based upon the charge of ten cents per pound for the gas.

COMPARISON OF ACTUAL AND INDICATED RATES OF CHLORINE CONSUMPTION AT SOMERSWORTH.

(1) Treatment commenced March 15, 1913. After a few days run it was discovered that the cylinder was delivering no gas and on the assumption that such was empty it was returned and found to contain a residual weight of 88 pounds of chlorine. Deterioration of the rubber washers originally used was found to be responsible for clogging of the cylinder orifice. Substitution of lead washers served to eliminate this difficulty.

(2) Second cylinder connected March 31, used until June 26; period of run, 87 days; weight of gas in cylinder, 110 lbs.

Average daily consumption (actual), 1.26 lbs.

Average hourly consumption (actual), 3.6 ounces.

Indicated hourly consumption (chlorine gauge), 5 ounces.

Indicated daily consumption (chlorine gauge), 1.72 lbs.

Indicated consumption during run, 150 lbs.

Actual consumption during run, 110 lbs.

Actual daily cost of treatment, 12.6 cents.

*Actual rate of treatment (440,000 gallons daily), 0.34 parts chlorine per million.

Cost of treatment per million gallons, 28.6 cents.

(3) Third cylinder connected June 26, used until August 28; period of run, 63 days; weight of gas in cylinder, 98 lbs.

Average daily consumption (actual), 1.55 lbs.

Average hourly consumption (actual), 4.2 ounces.

Indicated hourly consumption (chlorine gauge), 5 ounces.

Indicated daily consumption (chlorine gauge), 1.88 lbs.

Indicated consumption during run, 118 lbs.

Actual consumption during run, 98 lbs.

Actual average rate of treatment (480,000 gallons average daily), 0.39 parts chlorine per million.

Actual daily cost of treatment, 15.5 cents.

Cost of treatment per million gallons, 32.3 cents.

WATER STERILIZING OUTFIT, SHOWING CHLORINE REGULATING APPARATUS.

Referring to the cut preceding, the gas is stored in the cylinder on the right, the pressure of which is indicated by the middle gauge. The gauge at the left indicates the rate of admission of the gas in ounces per hour, this being set at a definite point by means of the control valve shown at the left in the box. The absorption tower, from the bottom of which a hard rubber pipe conveys the gas solution to the pump well, is seen on the left.

In every case the treated water afforded negative results for colon bacilli, although with one or two exceptions such were uniformly present in one cubic centimeter of the raw water and were also found during the past year in a number of samples of filtered water.

The samples were collected and forwarded by the water works superintendent. Although kept on ice, it should be noted that as a rule there was an interval of about twenty-four hours between collection and plating of samples, a condition productive of higher counts than where plating is done immediately. Although it was requested that samples be taken of the filtered and untreated water, but two were received and the examination of one of these indicated less than 15 per cent removal as a result of filtration. Furthermore, as similar results were afforded by two lots of samples collected previous to the installation of the treatment, it is obvious that at

*During this period there were times when the gas absorption at the pump-well was not quite complete and a little chlorine was lost into the atmosphere. While the loss was apparently inconsiderable, this was effectually remedied by the installation of a return pipe to the absorption tower. At the present time the odor of chlorine about the station is wholly absent.

present no great reliance can be placed upon the operation of the filter, aside from the removal of suspended matter, although it is reasonable to believe that much of the time it may be doing good work, bacterially.*

In any comparison of the relative amounts of actual chlorine consumed at Lakeport and Somersworth, it should be understood that the two supplies are far from similar in character. The latter, highly colored as it is and carrying much more organic matter, would necessarily demand a larger proportion of any form of disinfectant.

STERILIZATION BY THE USE OF BLEACHING POWDER AND CHLORINE.*

BY CHARLES D. HOWARD, *Chemist*.

Wherever the source of water supply contains very much suspended matter or is highly colored, filtration (with alum for color removal) is the sole remedy. In fact neither the violet-ray nor the ozone treatment previously cited can be carried out successfully in the absence of previous filtration.

There are, however, two circumstances where the use of a cheap disinfecting agent has proved itself of very great value. One of these is auxiliary use in conjunction with a filter system that is overloaded or not working properly; the second is concerned with those cases, very frequent in New England, where the water, though clear and comparatively clean, is, nevertheless, not quite safe for use in the raw condition. An example of the first is to be found at Somersworth, where treatment with chlorine gas was recently installed. The Laconia supply furnishes an example of the second kind of cases, the bleaching powder treatment being here used as a precautionary means to ensure the entire safety of Lake Pausus water.

BLEACHING POWDER TREATMENT EXTENSIVELY USED.

While the application of chlorine gas direct is a comparatively new and untried proposition, the use of bleaching powder, or "chloride of lime" (calcium hypochlorite), in this connection has steadily advanced from the time of its first successful employment in 1908 for treating the water supply of the Chicago Stock Yards (Bubbly Creek), and today we find this process to be in common use throughout the country—one that has become thoroughly established in the opinions of sanitary engineers as an exceedingly valuable agency in water purification.

Recently the Ohio State Board of Health sent out a circular letter of inquiry addressed to the water departments of cities of 25,000 population or over. Of the ninety-nine cities replying and having surface water supplies, thirty-eight were using the hypochlorite treatment. These cities were unanimous in endorsing its value. As a matter of fact, the number of places

*See tabulated analyses under "Somersworth."

†From Bulletin for July-October, 1913.

actually employing this treatment is much greater than the above figure, if we consider *all* cities and towns.

As a result of this inquiry, the board concluded that hypochlorite not only "usually causes no tastes, odors, or corrosive action when used in small amounts" but also that "it is effective in removing a large percentage of the bacteria in water and practically all those of intestinal origin." It further concluded that "though hypochlorite has been found effective in cases of emergency, its constant use is advisable, especially with unsafe or dangerous supplies, for the reason that it is better to prevent epidemics than to attempt to destroy them when they occur."

Possibly the most notable as well as the example of largest use of bleaching powder for water purification is that in connection with the New York City supply, involving the treatment by this method of upwards of 380 million gallons daily of Croton water. In this case the treatment, now being installed, is mainly precautionary, as the water is not subject to gross contamination.

NATURE, MODE OF ACTION AND COST OF BLEACHING POWDER.

Chemically, bleaching powder consists of chlorine gas in combination with slaked lime, the chlorine being prepared by the electrolysis of common salt. It is packed in iron drums holding 300 pounds and upwards, the cost at wholesale being now quoted at less than $1\frac{1}{2}$ cents per pound. The effectiveness of bleaching powder depends upon its "available chlorine" content, which should not be less than 35 per cent. The mode of chemical action consists in free hypochlorous acid being liberated by the natural carbonic acid of the water. The former acid, in the presence of organic matter, immediately decomposes, with liberation of active oxygen. It is oxygen, therefore, rather than chlorine, which actually accomplishes the destruction of organic matter and bacteria, and this is true as well where chlorine gas is used as the medium of sterilization.

For the benefit of those who would object to thus "medicating the water supply," it may be stated that the quantities used are exceedingly minute, and not only this but the process involves the complete decomposition of the chemical, changing the latter over into inert mineral salts. One, therefore, does not actually drink "chloride of lime" in water thus treated, even in minute traces; neither is there any likelihood, under the method of use, of any odors or tastes of chlorine—any such complained of being rather the result of suggestion, based upon knowledge of the nature of the treatment being used.

RATES OF TREATMENT.

Thus with the Laconia supply it has been found that good results are attained at the present day by the use of less than three pounds of bleaching powder per million gallons, or only about a quarter of a pound to a million

pounds of water. When it is appreciated that the total mineral ingredients of our surface waters average not far from 20 pounds per million pounds of water, and that the naturally present chlorine amounts to one or two pounds, it will be seen that the addition thereto of one tenth of a pound of chlorine, combined in the form of harmless salts, is a matter of no moment.

It is true that the present rate of treatment at Lakeport (0.10 parts chlorine per million) is abnormally low, rates of from 0.2 to 0.5 parts of available chlorine (equivalent to 5 to 12 pounds of bleach per million gallons) being more common. The average found by the Ohio board in the case of 34 cities was 8.66 pounds per million gallons, corresponding to 0.36 parts of chlorine per million parts of water. Much larger amounts than the above have been used without the development of odor or taste.

THE LAKEPORT HYPOCHLORITE PLANT.*

At Lakeport it was planned at the start to treat at the rate of 0.20 to 0.25 parts of chlorine. Later, a new centrifugal pump was installed having a working capacity of 147,000 gallons per hour—nearly two and one half times that of the old one. Notwithstanding this, however, the rate of solution delivery does not seem to have been materially increased to meet such increased rate of pumping; and furthermore, analysis of the bleach solution showed it to fall materially short of the strength specified, the result being that the actual rate of treatment at the time of the writer's visit was found to be equivalent to .09-.10 parts chlorine only, or equivalent to but about two and one half pounds of bleaching powder per million gallons. Nevertheless, as our examinations just previous to this time had demonstrated satisfactory bacterial removals, the above rate has been allowed to continue. For counts afforded see tabular matter under "Laconia."

From the table it is apparent that the bacterial population of Lake Paugus varies considerably and that at times it is quite high, notwithstanding its comparative freedom from organic matter and general good appearance. It is probable that the pollution entering through the Weirs Channel is pretty well spent by the time the current reaches the intake, although that there is a certain appreciable amount of danger from this sewage entrance, especially during the summer months, cannot be questioned. Experience has shown that the water of lower Lake Paugus is at times very rich in microscopical organisms, such having given some trouble in the past from development of odors and tastes. For the future prevention of the latter, this treatment is admirably adapted.

Considering the absence of filtration and the very small proportion of bleach used, the results shown in the table are considered remarkable. In most cases the bacterial removals are close to 99 per cent, frequently more than this, and in no case did one cubic centimeter of the treated water afford a presumptive reaction for *B. coli*. It is true, because of the large number of bacteria originally present, a few of the results indicate a larger

*A description of this plant will be found in the Report for 1911-12.

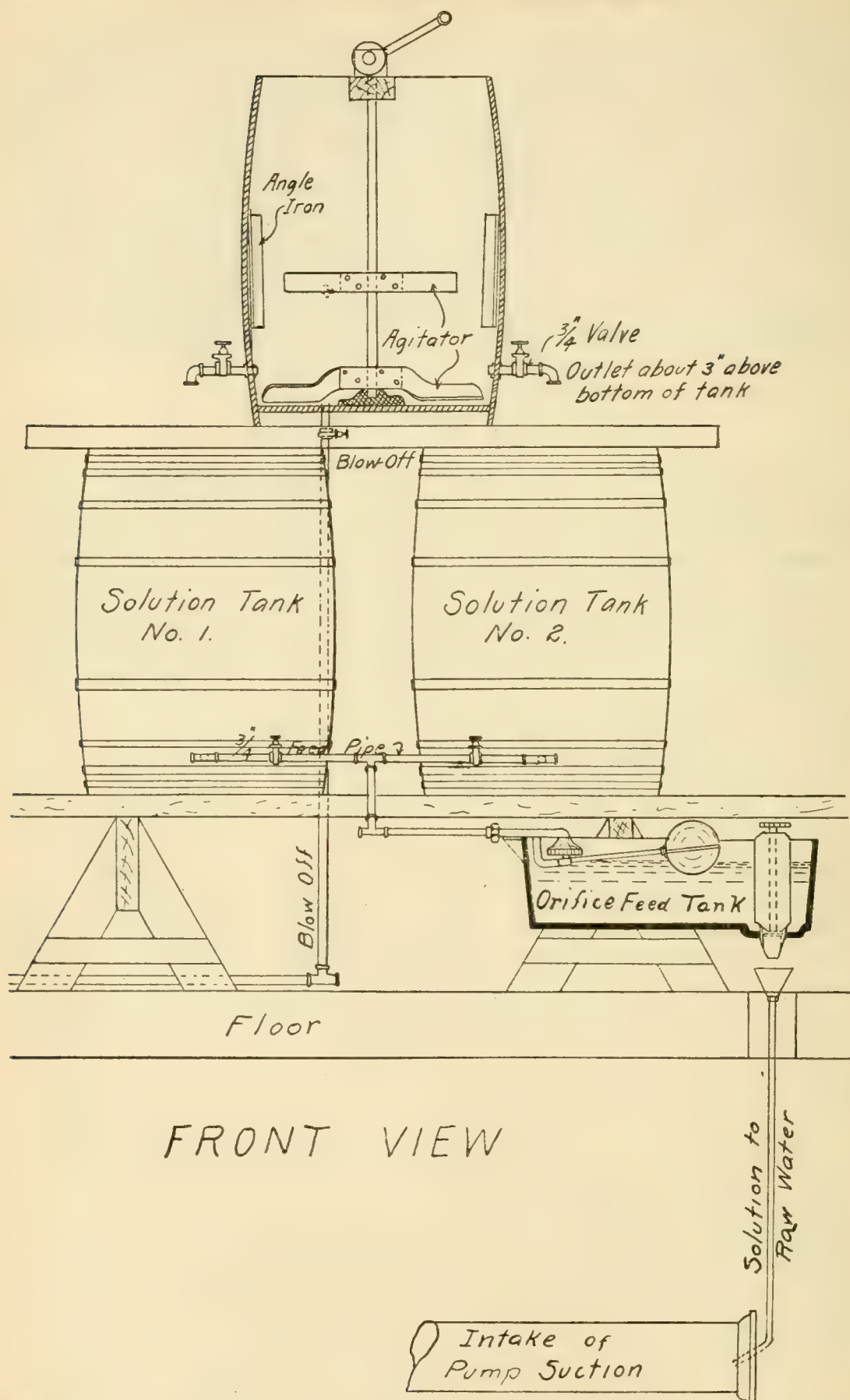
residual number growing upon gelatin than is generally allowable in connection with the best filtration practice. However, these forms may be considered harmless. It will be noted that those growing at body temperature, which include the forms liable to make trouble, are in every case present in the treated water in small numbers.

This fact would seem to bear out the claim made for the treatment, that the dangerous pathogenic varieties are the first ones to succumb and the most readily disposed of. Laconia has had but very little typhoid fever in the past. However, the claim has lately been made that the number of cases of bowel disturbance has been notably less this season than usual, and it is believed that there may be a direct relation between this fact and the sterilization treatment applied to the water supply.

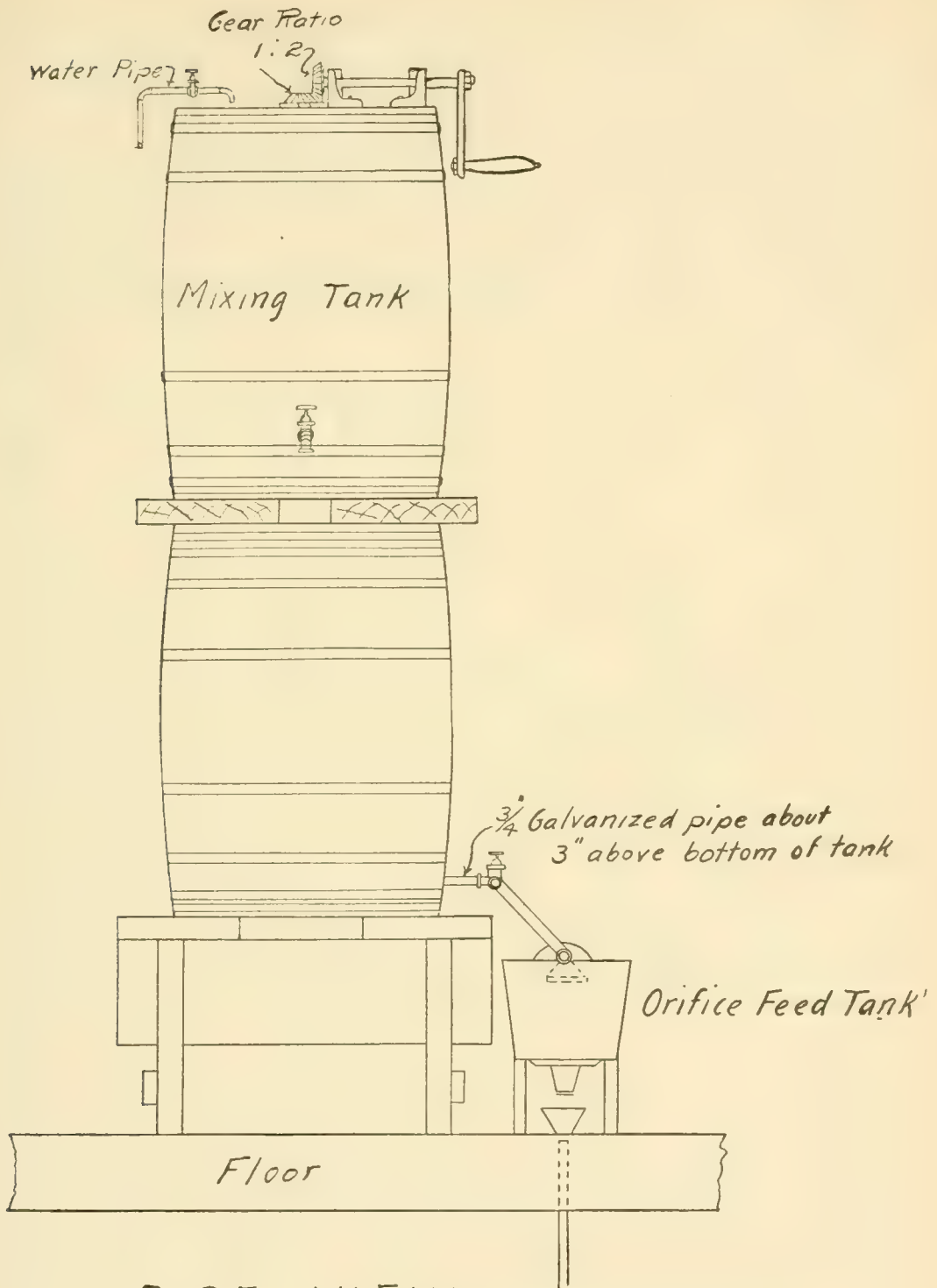
EMERGENCY DISINFECTING APPARATUS.

Water systems are liable at times to contamination as a result of temporary pumping from impure or suspicious sources in consequence of fire or serious drouth or because of some accident. Elsewhere the value has been recognized of immediate means of rendering such water safe, and already quite a number of state boards of health have adopted the plan of keeping portable disinfecting outfits in reserve. This board has recently had such an outfit constructed along the lines of that in use by the Virginia Health Department, the object of such being partly for the emergency use of any water works suddenly finding itself in need of this service, partly for educative purposes with a view to familiarizing local departments with its nature and the desirability, just as with fire apparatus, of having such an equipment on hand, wherever the character of the supply is such that temporary contamination is liable.

This outfit,—the cost of which, inclusive of a porcelain-lined feed tank with hard rubber float valve and orifice, is about \$60,—consists of three hard-wood barrels of about 50 gallons capacity, serving respectively for mixing and storage, together with the feed regulating device. The mixing barrel is provided with stirrers operated by a hand crank and gears. The inside of these barrels as well as all metal work are protected from corrosion by two coats of asphalt paint. The piping is of brass, which resists corrosion better than galvanized iron. The bends are formed with tees rather than with ells, in order to facilitate cleaning out.



EMERGENCY HYPOCHLORITE PLANT (VIRGINIA STATE BOARD OF HEALTH.)



SIDE VIEW

APPARATUS IS READY TO SHIP AND PLACE IN OPERATION FOLLOWING A FEW HOURS' NOTICE.

Bleaching powder has quite a corrosive action upon both iron and soft wood. Cement should always be adopted for permanent construction, although oak and cypress will last for some time. The most resistant common metals are bronze and brass. Hard rubber is unattacked.

To operate, the amount of bleaching powder required for a half day or day's run is placed in the mixing barrel, water added to about half full, and the mixer operated for several minutes.* If desired, water may then be added until the barrel is nearly full, the stirring continued, and the contents allowed to settle until perfectly clear before drawing off into one of the storage barrels. In order to ensure continuity of operation, the other barrel is filled in the same way and kept in reserve.

LIQUID CHLORINE AND BLEACHING POWDER TREATMENTS COMPARED.

As regards the relative cost of bleaching powder and liquid chlorine, inasmuch as about three pounds of the former are equivalent in chlorine value to one pound of the latter, the cost per unit rate of treatment, using liquid chlorine, is approximately double that for bleaching powder, the actual cost of the former being ten cents per pound. However, against such extra cost should be credited the expense saved of constructing housing for the hypochlorite treatment, also the labor of mixing, removal of sludge, etc., in the latter case.

A further advantage is in the fact that the process requires practically no attention, it being merely necessary for the engineer, before starting the pumps, to turn on the absorption water and open the cylinder valve. And assuming that the regulator continues to work properly, the application is more constant and certain, in unskilled hands, than it is liable to be with hypochlorite—a substance prone to rapid deterioration.†

A final advantage is in the complete absence from the pumping station of the vapors of chlorine—disagreeable to inhale and corrosive of polished metal work. Experience shows that unless there is a special system of ventilation, the operator of a hyperchlorite plant is liable to find the mixing process productive of headaches. However, this difficulty is insignificant in the case of small works.

LIMITATIONS OF STERILIZATION.

It may be well to emphasize that the use of hypochlorite or chlorine, as well as other methods of sterilization, do not afford complete substitutes for filtration. Such treatments serve in no degree whatever for the removal of either turbidity or color, so that where the raw water is appreciably dirty or highly colored, filtration will always be indicated. It might also be emphasized as regards color that the slow system of filtration cannot usually be depended upon for the removal of more than about one third of such. For this condition the application of a chemical coagulant—ordinarily in conjunction with rapid filtration—is the only remedy.

*In the absence of a mechanical mixer, the powder should be thoroughly stirred with a small amount of water ($\frac{1}{2}$ lb. per gallon) before diluting.

†The chlorination treatment apparatus recently installed at Woodsville embodies a number of valuable improvements over the Somersworth construction.

PURIFICATION METHODS NOT INFALLIBLE.

In conclusion, a word of consideration may be given to the argument which the cynically inclined are fond of advancing against these processes of purification—that is, that their value is altogether dependent upon the faithfulness and intelligence of those in charge. This is true, though no less so of the older process of filtration than of the more modern methods of sterilization. No purification plant will run itself. In this regard, as in railroading and other activities demanding constant vigilance, the human element is a factor which will always have to be reckoned with. And a difficulty attaching to positions of this character—indicative of the requirements not only of intelligence but of a peculiarly high degree of faithfulness—is in the fact that the result of any faulty operation of water purification plants is very apt to be inapparent to both operator and public—at least for a time.

HOUSEHOLD FILTERS.*

The use of a filtering device attached to the kitchen water faucet is a very common practice. Such “filters” are frequently peddled by agents, and unfortunately are apt to be sold under exaggerated claims for their value. But whether these devices depend for their effectiveness upon sand, charcoal, cotton pads, or very fine wire cloth, it should be understood that for the purpose of rendering a suspicious water safe—that is, for the removal of harmful bacteria—they are of no value whatever. However, if cleaned sufficiently often, their use may at times be advantageous for the elimination of suspended matter and such forms of animal life as occasionally find their way into the house main from a surface-water supply. In short, they are strainers—nothing more.

The more expensive purifiers of the Berkefeld or Pasteur type are in a different class, these being true filters. Such consist of hollow cylinders, or “candles,” formed of unglazed baked earth, contained in metal jackets and arranged to attach to the faucet. Properly cared for, they are of actual service for water purification. Unless, however, filters of this kind are taken apart, cleaned and thoroughly sterilized every day or so—and herein is one of the chief fallacies concerning the practical value of the household filter—they are apt to be even worse than useless.

Where no water pressure is available there are on the market combination filters and “coolers” consisting of jars of unglazed earthenware and operating on the Berkefeld principle. Here too, the weak point is in the fact that such devices are in practice apt to be neglected and the filtering medium may even become a nesting place for germs. Thus it has been demonstrated that, under certain conditions, water passed through one of these domestic filters may contain more bacteria than it did in the first place.

Recently there has come into use a portable filter designed for the rapid filtration of comparatively large volumes of water, such being originally in-

*From Bulletin for July-October, 1913.

tended for the use of troops in the field.- This apparatus, which operates on the principle of the mechanical filter, consists of a large galvanized iron tank, with two smaller mixing tanks. To the raw water contained in the latter is added a dose of about five grains of sulphate of alumina, together with a sufficient excess of alkaline carbonate to insure complete precipitation of the alumina. After mixing thoroughly, the treated water is emptied into the large tank, from which it is eventually drawn by means of a brass syphon tube. The short limb of the latter terminates in a metallic cage around which a thick pad of freshly sterilized flannel is securely bound. The floccules of alumina and organic matter pick up the bacteria and all are held back by the flannel. While it is possible that, in addition to decolorizing and clarifying a comparatively dirty water, this apparatus is capable of doing good work bacterially, yet a circumstance against it is in the fact that the relatively large dose of alum recommended, necessitating as it does an accompanying addition of alkali, involves the presence in a gallon of the filtered water of a number of grains of Glauber's salt—a drug which, though of value as a constituent of a medicinal water, is objectionable in a regular drinking supply. Though such an apparatus would be of value for clarifying a physically dirty water, it is probable that for the purpose of merely rendering safe the comparatively clear waters of this section, the application thereto of a homeopathic dose of bleaching powder solution would not only be quite as effective and satisfactory, but much more convenient*

REPORT CONCERNING THE CHARACTER OF SPRING WATER SOLD IN CONCORD.

APRIL 9, 1913.

An examination of samples of Crystal spring water sold in Concord, together with an investigation of the source, revealed the following facts, as reported by the chemist of the Board under date of April 9, 1913:

In the first table of analyses, No. 1651 and No. 1652 were submitted by Mr. Robinson November 7, 1903, under the designations, "Spring No. 1" and "Spring No. 2," the latter in all probability being the same source as No. 10862, mentioned later.

Nos. 10862 and 10863 were collected by myself April 3, 1913, the first from the spring on the flat, between the village and the railroad tracks, the second from a spring located in the woods east of the village.

	No. 1651	No. 1652	No. 10862	No. 10863
Odor	0	0	0	0
Color	0.0	0.0	0.05	0.0
Turbidity	0.0	0.0	0.0	0.10
Sediment	0	0	v. sl	v. sl
Free ammonia	0.0020	0.0020	0.0006	0.0006
Albuminoid ammonia..	0.000	0.0020	0.0010	0.0008

*A recent application of this principle to the purification of army and camp water supplies consists in the use of a waterproof bag provided with a faucet in the bottom. After filling this bag with water and hanging it up, the contents are treated with a dose of hypochlorite.

Chlorine	0.20	0.75	1.30	0.25
Nitrates	0.020	0.150	0.035	0.005
Nitrites	0.000	0.000	0.000	0.000
Solids	3.40	7.70	9.4	
Hardness	1.1	2.9	2.7	0.3
Colon bacilli .....	.....	.....	neg	neg

(The first and fourth and the second and third represent the same sources.)

In the following table, No. 10753 represents water collected from spring at State Prison Feb. 13, 1913; No. 10759 is Crystal spring water as delivered in carboy by Batchelder & Co., Feb. 15, and No. 10769 is the same, delivered in carboy Feb. 21, 1913.

	No. 10753	No. 10759*	No. 10769*
Odor	0	0	0
Color	0.0	0.0	0.0
Turbidity .....	.....	.....	.....
Sediment	0	0	0
Free ammonia	0.0006	0.0008	.....
Albuminoid ammonia	0.0006	0.0008	.....
Chlorine	0.18	1.33	1.35
Nitrates	0.003	.....	.....
Nitrites	0.000	0.000	.....
Solids	3.5	11.5	11.1
Hardness	0.1	3.5	3.7
Colon bacilli	neg	neg	neg
Total bacteria per cc.....	.....	.....	20000

The above analyses indicate that the spring in the woods represents water of excellent quality (No. 1651, first table), though not, as a whole, being quite up to the excellence of the Prison spring water (10753). It is apparent from the analyses of the lower spring water (Nos. 1652 and 10862) that the water delivered by Batchelder & Co. (10759 and 10769) was altogether from this source. This latter spring is located near the base of the hill that extends from the main street to the railroad track. The immediate vicinity is pasturage, but there is chance for drainage from the numerous stables, etc., located just above.

This spring is much larger than the spring located in woodland east of the village, and notwithstanding its comparatively inferior quality, is apparently the one mainly drawn from for the sale of water. The criticism that is raised against this source is, not that the water is likely to prove distinctly unsafe for drinking purposes, but that, in view of the proportion of chlorides, nitrates, mineral salts, etc., it is not of the high degree of excellence represented; that, notwithstanding its appearance is better, it is really neither better nor safer on the whole than is the water of our city supply.

Water from both these springs is conducted to the house, partly through cement-lined iron pipe, partly through wooden pipe, and there is a shut-off on each so that either can be drawn from at will. The bottling arrangements

*See also results of later analyses tabulated under "Concord."

demand criticism. The bottling is done in a wagon-shed and there are no facilities for proper washing and sterilizing of the bottles. The need of improvement in this respect is further evidenced by the high bacterial count afforded by No. 10769. The sale of such as "pure spring water" should not be tolerated. As the open empty bottle standing in the home is liable to contamination or defilement in a great variety of ways, the thorough cleaning of such, using hot water, should be observed in each case before refilling. It is asking nothing unreasonable to require that for the purpose of bottling there be provided a room specially partitioned off and provided with running hot water.

TROY.

On June 23, 1913, inspection was made of two sources under consideration in connection with the introduction of a public water-supply system.

These sources are (a) Mitchell Brook, southwest of the village, and (b) Fassett Brook, having its origin to the northeast in the base of Mt. Monadnock. Previous to this date samples had also been collected from three other brooks, viz., Whitcomb, Dexter and Ratikan, but these sources have since been eliminated from consideration. A survey was made of the Mitchell Brook proposition some ten years ago, and some engineering data is therefore available with regard to this source. Fassett Brook is as yet unsurveyed.

This town is much in need of a water system, many of the available wells having been condemned as polluted. A certain amount of fire protection is at present to be had from a pond in conjunction with a fire pump installed in one of the shops. This pond, however, is badly sewage-polluted, and as there is no other pond available, water supply is a matter of either sinking wells and constructing a pumping system, or the installation of a gravity system from one of the brooks, the latter being the plan most favored at present.

A complete circuit was made of Mitchell Brook, going above the head waters. The whole territory included in this watershed consists of dense woodland, down to the point where the dam for the upper reservoir would be constructed. This is at a point about one and one-half miles from the village, and a dam to afford a storage here of 1,000,000 gallons would involve a head of about 300 feet, it is estimated. In order to save the expense of putting in a full sized distributing main from this point it is proposed to conduct the water from here to a point about 1000 feet from the village through a small 6" feed pipe. This second, or distributing reservoir, the size of which is planned for 2,000,000 gallons, would not be located upon the brook but would be deflected therefrom to a plot of land 40 or 50 feet higher up than such brook. In this way, the water of Dexter Brook, a tributary of objectionable character, as well as all that from the lower watershed of Mitchell Brook, would be eliminated from this system.

The installation of a supply from this source, as also from the Fassett Brook source, would, it appears, involve thorough stripping of all the surface growth on the territory to be inundated.

(b) Inspection shows that the watershed at the head waters of Fassett Brook is much more open land, being largely pasturage. While this is the

only objectionable sanitary feature, apparently, attaching to this source, still it is stated that but few cattle are now pastured in this locality and it seems quite probable that through purchase of the land and fencing for a sufficient distance back, this objection could be remedied without any great expense or difficulty. Here, also, two reservoirs would be constructed, partly to avoid the expense of laying large pipe, also because of the pressure otherwise involved in direct draft from the proposed point of intake. This first dam would be constructed at a point three and one-half miles from the village, the second, about one and seven-tenths miles therefrom. There are two or three cottages located on this watershed, though well back from the brook in each case.

In connection with a selection from the sources mentioned a number of factors are to be considered:

Ist. Quality. Analyses of the single samples thus far collected (May 15) show:

(Parts in 100,000)

	Mitchell Brook	Fassett Brook
Odor	sl. swampy	none
Turbidity	very slight	very slight
Sediment	sl. flocculent	v.sl. flocculent
Color	0.40	0.07
Total solids	3.0	2.8
Fixed solids	2.0	1.8
Hardness	0.1	0.1
Free ammonia	0.0010	0.0006
Albuminoid ammonia	0.0070	0.0030
Chlorine	0.07	0.05
Colon bacilli	negative	negative

It will be noted that the Fassett Brook water is very much better as regards appearance, there being nearly six times more color in the other source. In this respect, also in the low organic content, the Fassett Brook water is of exceptional excellence, while that from Mitchell Brook, as represented by this particular sample, is below the average, as to color, of our New Hampshire surface waters. Aside from the criticism previously mentioned, Fassett Brook could be unquestionably depended upon as affording a highly satisfactory supply as to quality. On the other hand, aside from the degree of color, the composition of Mitchell Brook water is not unsatisfactory and will compare favorably, as to organic content, with our other surface supplies. It is unfair to base judgment of any surface water upon a single analysis; and while it is certain that the Mitchell Brook will at all times carry more color than the other, yet it should be born in mind that the stripping treatment, in conjunction with reservoir storage, may be expected to reduce the brown tint somewhat. It might also be pointed out that, because of the more highly vegetated character of the latter source, there is much more risk of possible difficulty at times from odor and taste due to the development of organisms. It would be well, pending final selection, to have further samples from both sources analyzed.

2nd. Quantity. It is believed that at first the number of families taking water from a public system would not exceed 100, and that the daily consumption would be less than 50,000 gallons. I am informed that the engineer who made the survey of Mitchell Brook claims that the source can be depended upon to afford a sufficient volume of water at all times, in conjunction with a storage reservoir. Without seeking to question this judgment, yet it may be stated that the flow at this time seems rather slight and as such has, I believe, never been actually measured, it would seem to be desirable to put in a weir and take measurements.

The same recommendation is applicable to Fassett Brook; for though the flow in this brook at present is of considerably greater volume than in the other, yet as this source is altogether from springs in high land, much of which is open, the possibility of a greatly reduced flow at times of drouth should not be overlooked.

3rd. Expense. Because of the increased length of pipe line necessitated, the Fassett Brook proposition would be the more expensive of the two, the actual difference in expense having been roughly estimated at as much as \$20,000 in favor of the Mitchell Brook project. This difference, to be sure, if correct, represents a large item to a town the size of Troy; and yet, if we were warranted in assuming that the above analyses afford a permanently correct representation as regards the difference in quality, I am of the opinion that unless it would mean the imposition of an unwarrantably great financial burden upon the town, the increased satisfaction which would accrue from the Fassett Brook supply would thoroughly justify the extra expense. This is a matter for local decision, and as already suggested, to assist in arriving at a decision, further analyses should be made.

WILTON.

In company of Mr. W. I. Durgin of the Board of Health and Mr. E. P. Hopkins of the Board of Water Commissioners, an examination was made July 17, 1913, both of the present water supply system and of the sources now under consideration for an extension.

The present supply is taken from Gaerwin Falls Brook, the latter having its source on the eastern slope of Pack Monadnock Mt. some dozen miles to the northwest of East Wilton. The intake reservoir is constructed at a point about one and one half miles from this village. The reservoir at the present time is extremely low and is daily becoming lower, and the demand for an additional supply is urgent. At present the flow of Gaerwin Falls Brook at this point is very slight—the volume being noticeably less, in fact, than that noted a number of miles above.

It is claimed that this brook has failed largely in recent years, there very seldom being as much water available as was the case during the year the supply was installed, about ten years ago. If this is true it should prove an object lesson to towns having the matter of water supply adoption now under consideration, as regards the desirability of careful preliminary observations and measurements extending over a period of a number of years.

Two new sources have been considered. One of these, understood to have been largely favored by the citizens because of supposed ease of availability and slight expense, is Burton's Pond, a body of water some five and one half miles from the village, whose outlet is a minor tributary (length about one and one half miles) of Gaerwin Falls Brook. The other possible source is Stockwell's Brook, so called, which is also a minor tributary of the stream mentioned.

BURTON'S POND.

This source was considered in conjunction with the original installation nine years ago, a number of samples having been collected for analysis at different periods just previous to such time. By means of a motor boat I also made a thorough inspection of this pond and took a sample at a point a short distance above the dam.

Burton's Pond is an irregularly shaped body of water (inclusive of many bays or coves), the area of which is variously estimated at from 60 to 100 acres. Having its source wholly in springs, it is artificial in character, resulting from the damming up of a meadow tract something more than seventy-five years ago. The pond is controlled by private parties operating a wooden-ware mill on the stream below. Although primarily designed as a reserve for power purposes, it is chiefly valued at present as a private pleasure ground, most of the shore land being owned by a single individual.

Than Burton's Pond no better example could be found of the futility of expecting ultimately to secure a satisfactory supply through the impounding of an unstripped area. Notwithstanding that this tract has been continuously flowed during a period estimated at nearly one hundred years, yet the pond is still full of stumps which only the use of dynamite would remove. Numerous slowly decaying trees and logs line the shores in places. Lily pads are noticeable. The depth is but slight, averaging about four feet, except near the dam. In spite of this, the bottom, which is covered by a dark vegetable ooze, is nowhere visible a few inches from the shore. The sample of water at time of collection exhibited a distinct yellow tint and showed the presence of myriads of minute whitish particles consisting of organisms and decaying organic matter.

Those in favor of Burton's Pond auxiliary argue that at practically no expense sufficient water could be delivered from this source to swell the main brook to normal volume at times like the present; that private ownership of water rights can in no wise be exercised as a bar against the town thus securing water for supply purposes; and that if the present gate cannot be operated, as is claimed, the water can be readily obtained by syphonage. On the other side, it is alleged that the water is not of satisfactory quality; that while an arrangement could doubtless be made with those now controlling the pond, yet past experience in this respect has demonstrated that to replace any material draft upon this body of water would require a period of a year or two, as the spring flow is but slight and accumulation extremely slow; and finally, that much better water—of a quality too

valuable to be wasted—can be secured nearer home. As regards the second objection, I am, of course, unable to offer advice, assuming there would be any extensive use.

STOCKWELL BROOK.

It appears, however, that the board of water commissioners had already rejected the Burton's Pond project, and, through ignorance of the new law requiring the approval of the State Board of Health prior to the construction of any enlargement of a system, had made all arrangements to take water from Stockwell Brook. I found a timber dam already constructed; men were employed in stripping the proposed reservoir site, and with the arrival of a gasoline pumping engine, it was expected to have the new plant in operation immediately. Such prompt action was in fact demanded, as at the present moment the reservoir is not far from empty.

Stockwell Brook enters Gaerwin Falls Brook a few rods below the present intake reservoir and at an elevation something over one hundred feet lower than such intake. In order to utilize the water it is therefore necessary to pump directly into the main line, by which process any excess not going down to the village would be carried upward into the reservoir for storage.

Notwithstanding that the length of the principal flow of this brook is probably not much over a mile, yet at the present time there is apparently in the neighborhood of double the amount of water that is being delivered into the reservoir from Gaerwin Falls Brook. The source is in nearby springs and most of the flow is through woodland. Unfortunately, the head waters are from open farming land, and a remarkable circumstance is in the fact that apparently at least one half of the total flow at the proposed dam—an amount equivalent to the flow of Gaerwin Falls Brook—gushes from an open slope which is fenced around and occupied as a poultry yard. This spring water is dammed up to form a duck puddle in the yard, the overflow entering the brook some fifty rods down in the meadow.

The water shed also includes in this neighborhood four or five houses and two barns. In the latter very little stock is kept. Drainage from three of the houses is such as to menace the supply in the absence of necessary improvements. Thus the sewer outlet from the Hallett Place, so called, and which serves two houses, discharges directly on the ground on a moderately steep slope possibly fifty rods from the brook. The houses in question are used for the most part only as summer residences and under normal summer weather conditions no trouble could of course arise. As, however, a heavy shower would readily carry this sewage to the brook, it is obviously essential that if this source is to be employed, cesspools of approved construction must be put in at once. A driveway through the brook at the highway culvert should also be closed.

The water of this brook at the proposed reservoir site is of excellent appearance, the gallon sample here collected appearing quite colorless and free from any suspended matter.

ANALYTICAL COMPARISONS BETWEEN BURTON'S POND AND STOCKWELL BROOK WATER.

The samples collected at this date gave the following results upon analysis:

	(No. 11257)	Burton's Pond (No. 11258)
Odor	faint earthy	distinct swampy
Color	0.08	0.45
Turbidity	none	consid. fine veg.
Sediment	very slight	slight gelatinous
Free ammonia	0.0006	0.0006
Albuminoid ammonia	0.0016	0.0200
Nitrates	0.005	0.005
Nitrites	0.0000	0.0000
Chlorine	0.15	0.15
Hardness	0.3	0.3
Total solids on evap.....	2.5	4.5
Fixed (mineral) residue.....	1.7	2.3
Blackening on ignition.....	v. faint	decided
Colon bacilli, 1cc.....	negative	negative
Colon bacilli, 10cc.....	v. faint react.	v. faint reaction
Biological examination.....	no organisms	organisms very numerous and varied.

The above indicates that Burton's Pond water at this time contains over five times as much color and nearly thirteen times as much organic matter as is true of Stockwell Brook. As compared with former analyses the pond water at present carries slightly more organic matter than was noted during 1904. Though not prohibitive, such amount is much above the average for our surface supplies and is, in fact, somewhat greater than any others have shown during the past year or two. At present we have three supplies that show as much and a little more color. One of these, however (Suncook), is to be abandoned at once, while the other two are both filtered. Microscopical examination of the turbidity shows the pond water to be a numerously populated aquarium of minute plant and animal life, many varieties ranging from the disagreeably odorous diatom *asterionella* up to the water scavenger *cyclops* being noted.

On the other hand, the chemical analysis of Stockwell Brook water is highly satisfactory, the degree of color and amount of organic matter being no greater than occurs in our best well waters. In fact, this is for all intents and purposes, spring water. Microscopical examination fails to indicate any biological forms in the amount investigated. Like the pond water, the sample does show a faint colon reaction on the larger quantity examined. Such might be due to contamination from the duck pond, or in both cases to a little agricultural drainage.

The sources of actual and possible pollution on Stockwell Brook, as well as the remedy therefor, have already been indicated. So far as the

analytical findings are concerned, it would appear that the duck pond pollution is not appreciable; yet even if only aesthetic considerations were here involved, the latter are sufficient to command the elimination of this feature. So far as transmission of serious disease is concerned, undoubtedly the sewerage condition already referred to represents a much greater menace.

Burton's Pond is subject to practically no sewage contamination, the only possible sources being in drainage from a single nearby farm and that from two camp cottages. As regards this pond as a source of supply, it may be stated that while the quality will not compare with that of Stockwell Brook yet it would serve sufficiently well to "tide over" during a dry time, especially as the quality would doubtless improve somewhat as a result of flowage after leaving the pond. On the other hand, the natural character of Stockwell Brook water is of such high excellence as to make it well worth while for the town to incur some extra expense in connection with a utilization and protection of this source.

SANITARY CONDITIONS SURROUNDING PRESENT SUPPLY.

As already stated, much of the course of Gaerwin Falls Brook is through open country, and the entrance of a certain amount of farm and highway drainage is therefore inevitable. Examination of the shores of this brook to a point in the town of Temple, some seven miles above the reservoir, showed that in quite a number of places the land is being cultivated close up to the banks. Under the law, the Board of Health has power to compel the owners to refrain from applying manure or fertilizer closer than a specified distance from the banks, and in the cases noted it would therefore be desirable for such board to serve notices upon the land owners concerned.

In two or three instances it was noted that drainage from farm buildings reached the brook, or would reach it under favoring conditions. In one such case, concerning which there was complaint a number of years ago, it was found that the situation had been remedied. Similar action should be taken in the other cases. A bad condition was noted at the Nathan Barker place, the house here being situated upon a bank not over twenty-five feet from the water, and the sink-drain discharging directly upon the ground on a slope toward the brook. A septic tank of the variety described in a recent issue of the Bulletin should be ordered for this place.

At the wooden-ware mill now owned by Dr. E. P. Frye, at Davisville, the proprietor has recently requested permission to construct two dry privies near the bank of the stream, using the removable metallic drawer type. Such permission may be granted subject to approval and oversight by the local board. Some distance above this point a cider manufacturer has allowed a large pile of apple pomace to accumulate near the brook. The removal of this should be ordered.

QUALITY OF PRESENT WILTON WATER SUPPLY.

Analyses of samples collected at intervals during the past nine years indicate that the quality of this supply compares favorably with that of other surface supplies in the state. For such a supply the proportion of organic matter is inconsiderable, although at times the color is inclined to be somewhat excessive and there is some silty sediment. The present consumption is estimated at about 20,000 gallons daily, and the reservoir is not large. Consequently conditions are not as favorable as might be desired for thorough sedimentation at this point. In addition, leaves also wash from a nearby road, tend to accumulate rather rapidly in the reservoir, with the result that there is some complaint at times that the water is unclean.

In consequence, there is some agitation in favor of the installation of a filter. The operation of a sanitary filter on a gravity system for a small town involves some difficulty. In order to avoid pumping, such a filter would have to be constructed at the reservoir, and the expense involved in the necessary daily attendance would render a filter of the rapid type scarcely feasible unless one of the closed or pressure type were adopted. However, the natural falls over which the brook passes in entering the reservoir would serve admirably for delivering the water upon a couple of slow sand filter beds that might be constructed at this point, a spillway being put in and arrangement made to permit of delivering upon a single bed at a time. While such a filter would not need to be a very expensive proposition, the most advantageous operation would demand the construction of a cover—a material item of expense.

WILTON WATER SUPPLY.

On March 6, 1914, Mr. Howard, chemist of the Board, went to Wilton for the purpose of conferring with members of the boards of health and water commissioners relative to certain features of the water supply. The following report was rendered:

The primary object of the conference was to secure further information and advice relative to the availability and fitness of Burton's Pond as an emergency supply. Last season the consent of the Board was given for such use of this water and it was estimated that the period of this use was some two weeks only. It is now desired to know whether or not the Board would permit of the drawing down (necessarily in part into the reservoir) of Burton's Pond to an extent sufficient to permit of the installation of a pipe and gate at the dam, with a view to continued future emergency use of this source. Inasmuch as this water is not sewage-contaminated and as such use seems likely to be on somewhat rare occasions and for limited periods only, the reply made was to the effect that it was not believed there would be any objection to this proposition, in so far as it concerned emergency use.

Pains were, however, taken to reiterate what was stated in the report of last year concerning Burton's Pond water, viz., that such pond is the result

of flowage of a swamp, that it is laden with decaying vegetable matter, apparent not only to the eye as a result of a survey of the shores and bottom of the pond, but also in the excess over normal of color and dissolved organic matter indicated in the water by analysis. In this respect it greatly resembles the present supply of the Suncook Water Works, the most highly colored supply in the state, and to relief from the further use of which the people of this town are now looking forward. It is quite true that its use may not be unhealthful. In fact there are a number of notable examples throughout the country where such brown colored swampy waters have been in use for years without any determinable ill effects upon the users. The point is that, according to recognized standards, such water does not constitute a good and acceptable supply, and the citizens of Wilton should not be satisfied to utilize this source in case it should later appear that it would have to be drawn upon to any greater extent than that already indicated.

In the latter event it is the opinion that the Board should give its approval to Burton's Pond only on the condition that the water be filtered. Some consideration has been given to the feasibility of installing a filter at the reservoir. There is no doubt that this could be managed advantageously at but moderate expense. In view of the cultivated character of much of the watershed of Gaerwin Falls Brook, the installation of a system of filtration or other form of purification in many cases is rather desirable, though not indispensable. Strictly speaking, for the effective removal of such a degree of color as has been found in Burton Pond, the mechanical system of filtration using alum would be far preferable to the slow sand system. But inasmuch as the former demands daily attention, the other system is more feasible for a gravity supply, and for the latter the necessary chemical coagulation of the coloring matter could be arranged for in conjunction with a properly arranged sedimentation basin. Such a system could be installed at a cost well under \$5000, possibly much less than this sum could be made to suffice.

As was pointed out last year the town has in Stockwell Brook a source of most excellent quality and one very convenient to the reservoir. While there seems to be a decided difference of opinion as to the amount of water available from this source—some holding that it is far from adequate—yet the fact remains that during the drouth of last summer this brook was delivering even more water than the main Gaerwin Falls source. A local engineer estimated the flow at that time to be close to 150,000 gallons per day, a volume which alone should be much more than sufficient for the needs of 1000 users. Unfortunately there seems to have been some discrepancy between the water pumped *out* of this brook by the pumping system which the town already owns, and the volume of water available in the system, the latter not filling up to account for the apparent pumpage rate. This the engineer explains on the theory of wastage. In the light of experience elsewhere it is believed that this theory may be a correct explanation. Where a supply is unmetered there is always a prodigious waste, not only from spigots allowed to run but from failure to repair leaky or defective plumbing, as would be done with a metered supply. In fact it would not be at all surprising should it prove that the present brook

supply would be at all times adequate were there a more careful system of inspection to rule out wastage.

While it is true that in order to utilize Stockwell Brook would not only involve some pumping but would also demand the purchase of a certain amount of property at the headwaters, yet I cannot escape the conclusion that with such excellent water almost at its doors it is but false economy on the part of the town not to assume the slight additional expense that the addition of this water to the system would involve. Finally, a third expedient meriting consideration in this connection is in the claim which is made that by extending the pipe some three or four miles up the main brook from the reservoir, (a) considerably more water will be available (there being subsequent material loss due to evaporation incident to sluggish shallow flow), (b) the water is said to be whiter and of more attractive appearance, and (c) there is the further advantage that most of the present opportunities for contamination through farm drainage would thereby be eliminated.

That any kind of a water supply will serve so long as it is not positively polluted is a notion which will be found to have its defenders in every town; but it is a highly mistaken one. No town—and especially one making any bid for summer business—should be satisfied with any other than water of the best quality. Such a supply is invariably found to be a valuable asset, one that pays well in the end. And in reality, the final net cost of a supply entitled to the rating of “excellent” over that for the indifferent or inferior grade will be found to be surprisingly small. As with most things, in considering the cost of a water supply, the cheapest in point of first cost is apt not to be the best or most economical in the end.

But admittedly, one can sometimes afford to put up with some drawbacks for a time. If the consumers are satisfied to accept for emergency use water of the character of Burton’s Pond, it may be questioned if the State Board of Health would be warranted in objecting, although it may be suggested that any such permission should be conditioned on its affording no validation for any possible future more extensive use. It might further be suggested that the commissioners be required to notify the Board whenever it becomes necessary to draw from this source.

MARCH 6, 1914.

BERLIN.

The following facts were noted in connection with an inspection made June 27, 1913, of the system of the Berlin Water Company:

Water is obtained from two sources, (a) a series of mountain brook reservoirs, (b) Androscoggin River after having passed the filters of the Burgess Sulphite Fibre Company.

BROOK SUPPLY.

Concerning the brook reservoirs, five in number, located east to northeast of the city and at distances therefrom varying from one and one-half miles (Bean Brook reservoir) to six miles (Horn Brook reservoir), the engineer of the water company has supplied the following data:

Name	Capacity (gallons)	Elevation (feet)
Horn Brook No. 1 (South Fork)	635535	1461
Horn Brook No. 2	861075	1465
Anderson	2654450	1441
Stewart	661500	1279
Bean	1575260	1280

On account of recent raising of the dams, about twenty per cent should be added in each case to the capacities above indicated. At the Anderson reservoir a special gate permitting of direct draft to the city affords increased pressure for fire protection.

All of these brooks flow through heavily wooded country and as much of the growth is coniferous, the water is somewhat more highly colored than is true of the average New Hampshire surface supply. Both of the Horn Brook and the Bean reservoirs were visited. With the exception of the latter, all five reservoirs are remote from habitations, and danger of any sewage contamination other than might possibly arise in connection with camping or logging operations is practically nil. The Bean reservoir, being but one and one-half miles from the city, is visited to some extent by picnic parties, and has been known to be used for bathing. In view of this fact, fencing is desirable, although frequent inspection together with publication of a standing reward for information leading to the conviction of parties guilty of polluting this source, would be helpful.

The following analysis of the brook supply as drawn from a tap July 17, 1913, (no river water) is fairly typical of this supply.

Odor	none
Color	0.55
Turbidity	slight
Sediment	sl. brown flocc.
Free ammonia	0.0010
Albuminoid ammonia	0.0086
Nitrates	0.005
Nitrites	absent
Chlorine	0.10
Hardness	0.4

This water deposits more or less brown vegetable sediment and the degree of color is to be classed as high. While the above sample was without taste and showed no odor upon standing in a gallon bottle, ordinarily there is a certain amount of swampy or vegetable odor. The organic matter in this water is apparently quite stable, and aside from the matter of appearance, the character of the brook supply is satisfactory. The latter could doubtless be improved somewhat by keeping the shores better cleared than at present, so as to prevent excessive accumulation of vegetation in the standing water.

ANDROSCOGGIN RIVER SUPPLY.

This is represented by a portion of the clear water supply of the Burgess Sulphite Fibre Company. In order to clarify the water for manufacturing purposes the latter is passed through filters of the rapid, or so-called "mechanical" type. The Company's filter-house, situated on the bank of the river a short distance from the Boston & Maine Railroad station, contains fifty-two of these sand beds, each 15 ft. by 20 ft. It is stated that the total amount of water filtered during twenty-four hours is 50,000,000 gallons. The total area of these beds being equivalent to approximately 0.36 acres, this represents a filtration rate of about 140 million gallons per acre—day—an enormous quantity of water as compared with the normal rate for the slow type of filter, which is but one and one-half to three million gallons. For sanitary filtration the above rate is higher than the best practice with rapid filters, even using coagulant, and in this case, the process being designed primarily for manufacturing use, no coagulant is employed.

It is therefore apparent that while a satisfactory degree of clarification is doubtless effected, no continuously satisfactory degree of bacterial purification could possibly be hoped for by this process. It is universally recognized that for proper sanitary filtration by the rapid process the use of a coagulant is indispensable. While it is not denied that the present process may show very fair results much of the time—especially as the Androscoggin is not extensively sewage-polluted—yet any treatment that cannot be relied upon to afford a uniformly high bacterial efficiency *at all times* is of but little use for health protective purposes, particularly as knowledge of its use tends to convey a false sense of security to the consumers.

As regards the proportion of river water used, it is stated by Mr. Gooding, the engineer of the Berlin Water Company, that a three-days test, made during January last under weather conditions rendering an abnormally high consumption probable, showed the average total daily consumption during this period to be 1,180,000 gallons. While the rated capacity of the Water Company's pump at the filter plant is 1500 gallons a minute, the actual rate of discharge while pumping against the pressure in the main was found to be only about one third that figure (433 gallons per minute), the total daily amount pumped (during twenty-four hours pumping) being 623,000 gallons. As the ordinary duration of pumping is stated as being from 5 A.M. to 8 P.M., this would correspond to a total daily pumpage of approximately 400,000 gallons; that is, it may be assumed that in the neighborhood of one-third of the present total daily consumption is taken from the Androscoggin River.

In view of the facts above mentioned, we feel impelled to urge the adoption of chlorination for that portion of the Berlin Water Company's supply derived from the river. It seems probable that in view of experience elsewhere, a quantity equivalent to not more than 0.3 parts of available chlorine per million parts of water—possibly less—would be sufficient. This would be equivalent to about seven pounds of bleaching powder per million gallons of water treated, costing not more than 14c per million gallons.

It appears, however, that the Burgess Sulphite Fibre Company has constantly available a solution of bleaching powder containing thirty grams per liter of available chlorine, and that this solution could be advantageously utilized for the purpose. For a treatment of 0.3 part, this would involve a dilution of such solution of 1 : 100,000, thus requiring about ten gallons per million gallons of water. This addition should be made, preferably, to the clear water well in which the pump operates. In view of the insignificant cost of such treatment and the insurance thus afforded, not only against typhoid but sundry other more common enteric disturbances attributable to polluted water, it would appear that there is no valid excuse for the city's failing to avail itself of this protection.

GENERAL CHARACTER OF THE BERLIN WATER COMPANY'S SUPPLY.

Both the brook and the river sources represent water carrying a rather appreciable amount of dissolved vegetable matter and possessed of a comparatively high degree of color. In view of the modern demand for spring water quality in a drinking supply, a supply of the above character is inevitably sure to be subjected to a certain amount of criticism by the consumers, particularly at certain times and seasons. The presence of color is prejudicial to start with, and whenever a little taste or odor develops—as is certain to occur with even the very best of surface supplies at times—it is difficult to convince the average user that there is not something dangerous or very seriously objectionable about the water. In view of the degree of criticism which has been of late expressed concerning this supply, it is evident that the latter cannot be expected to prove very generally acceptable until the water from both sources is subjected to a process of clarification and color removal.

FORBUSH SUPPLY.

A few families on the east side of the river are supplied from wells situated upon a hill back of the Boston & Maine R. R. station. While these wells were not visited I am informed by the local health officer that the water is regarded as of excellent quality and that the existence of pollution is improbable.

A small amount of water is also said to be supplied from springs located in another part of the city. It is expected that samples from the latter source as well as from the Forbush system will be submitted by the health officer during the near future. Analyses of the supply of the Berlin Water Company are made periodically.

DEAD RIVER SEWERAGE.

The objectionable condition presented by the discharge of sewage and refuse into Dead River was investigated. This is a small stream which flows through the heart of the city and discharges into the Androscoggin River near the plant of the International Paper Mills. While from a point near its emergence into Main street it passes through a conduit, the flow for some distance

in the rear of Main street, as well as that through a considerable section of the thickly populated portion of the city, is in an open channel. Not only do numerous sewers discharge into the stream at various points but both the channel and its banks are extensively used as a dump for refuse. The stream being at the rear doorsteps of the Main street stores, quite a proportion of the material thrown out consists of refuse edibles, for the possession of which during the warm days, flies and small boys are ever contesting.

To the merchants affected this stream is doubly a source of annoyance, from the fact that during the late winter and spring their basements are frequently flooded with the foul water, while during the summer, the flow being then so slight as to be insufficient to properly dilute the sewage, an overpowering stench prevails.

While the conditions are such as would not long be tolerated by any self-respecting American city, yet I find that in this case the attainment of any final remedy is beset by peculiar difficulties. On account of the ledge formation the construction of a system of sewerage adequate to accommodate all of the sewage from both sides of the river would entail an expense of many thousand dollars, so the city engineer represents. Another difficulty is presented in the fact that one of the mills owns a log-floating right of way through this stream, and any covered conduit system would have to be so constructed as not to hamper the exercise of this right.

Though it would seem that a conduit is the logical ultimate remedy, yet pending the construction of such, greatly improved conditions could be secured (a) by clearing out and improving the channel (b), requiring that all sewer discharges be extended to the middle of the channel, so that such discharges shall at all times have the benefit of the maximum dilution available; (c) prohibition of the dumping of refuse in or near the stream.

HAMPTON WATER WORKS.

On August 5, 1913, in pursuance of the provisions of chapter 205, Laws of 1913, in connection with a request of Hon. E. G. Eastman, a director of the Hampton Water Works, an examination was made of the plant of this company and also of a proposed extension of their source of supply.

The present source consists of wells situated in an uncultivated field near the edge of woodland, about forty rods north of the trolley line and possibly a mile back from the beach. In addition to thirteen driven wells, averaging about 18 feet deep, there are three large dug wells, 12 to 25 feet in diameter, with a fourth now under construction. Notwithstanding that solid ledge was encountered in the latter at a depth of seven or eight feet, the construction is being continued. The third well of the series, but recently completed, has proven a failure, so far as the accumulation of any satisfactory volume of water is concerned. A marsh pond a few rods east of the latter well also affords increased protection in fire emergency. This source should not be used for drinking purposes.

The water is pumped by electric current to a steel standpipe, pumping being continuous during the twenty-four hours. The quality is highly sat-

isfactory, particularly for a coast water, an analysis of a sample collected by the board of health April 14, 1913, being as follows:

	Parts in 100,000
Odor	None
Color	None
Turbidity	None
Sediment	None
Total solids	9.5
Fixed solids	6.0
Free ammonia .....	.0014
Albuminoid ammonia .....	.0020
Nitrates .....	.020
Nitrites .....	.0000
Chlorine	1.65
Hardness	2.6
Zinc	0.1
Colon bacilli ...	Negative

Except during August, the normal daily consumption during the season is about 150,000 gallons. The August requirement, however, is 200,000 gallons or more, and as the present well supply not only cannot furnish this additional amount, but is of late seriously below its normal capacity, the immediate acquisition of another source has become imperative.

The supply which has been provisionally adopted consists of Nilus Brook, so-called, a small stream to the north of the pumping station. The proposed point of intake is in meadow land belonging to J. W. Mace, and is 2,000 feet from the station, it being planned to construct a temporary basin of lumber and to pump the water from the latter into one of the new dug wells by means of a gasoline engine, through 2-inch pipe laid on the surface of the ground. Mr. A. W. Dudley, Engineer, has estimated that the brook will supply upwards of 200,000 gallons at the present time.

A sample of this water, collected August 1, afforded the following analysis:

WATER FROM NILUS BROOK.

	Parts in 100,000
Odor	v. sl. marshy
Color	0.05
Turbidity	slight
Sediment	mod. flocc.
Free ammonia	0.0020
Albuminoid ammonia	0.0020
Nitrates	0.005
Nitrites	0.0000
Chlorine	1.45
Total solids	13.5
Fixed solids	9.5
Hardness	4.6
Colon bacilli	strongly positive

The above indicates a spring water that has taken up but little nitrogenous matter and practically no color during its surface flow. Much of the sediment, carbonaceous in character, was undoubtedly mechanically introduced during collection of the sample. The only serious feature about the analysis, preventive of a report of "good water," being rendered, is in the decided reaction which this sample affords for colon bacilli.

The brook has its source in spring-heads about two miles from the proposed intake. An inspection of this and of a small tributary showed the existence of two farm houses on the water-shed. On one of these farms, known as the Burlingame or Perkins place, there is a narrow strip of pasturage extending for a number of rods along one bank of the brook, the line fence being at the water's edge. At one point some ten feet from the brook a small spring issues, at which it is apparent the cattle are accustomed to drink. The farm buildings are less than fifty rods above, on a gentle slope, and there is a possibility of some wash from the barn yard reaching the brook following heavy showers or during rainy weather. Some four or five vegetable plats were also noted at points close to the brook.

It is therefore recommended that the company ultimately purchase the pasturage strip referred to—at least the lower half of such—and also take measures for the prevention of any future application of stable manure or insecticides within a fixed distance from the brook (Chap. 108, sect. 13, Public Statutes.) Pending this and the making of further examinations to determine the frequency and extent of the contamination by colon bacilli, in order to permit of immediate use in this emergency, the superintendent has been directed to treat the brook water as pumped to the well with a solution of chloride of lime at the rate of one pound to 100,000 gallons. While, in my opinion, there is no danger of any specific disease infection from this source, yet in view both of the analytical and inspection findings, the above precaution is warranted, to insure there being no chance for question as to the fitness of this auxiliary source for drinking purposes.

HAMPTON WATER WORKS.

(Second Inspection.)

An examination June 30, 1914, of conditions in connection with an extension of the present Hampton Water Company's system showed the following facts:

The present driven well system, for some time inadequate for the demands of patrons, is being extended so as to supply water to residents not only of Hampton Beach (the original extent of the system) but those of Little Boar's Head, Hampton Village, and Rye Beach. For this purpose, Marston's spring, so called, is being developed. This is a very large spring, of considerable local repute, situated on the boundary line between the towns of Hampton and North Hampton and at a distance of about two miles from the shore. The elevation is about 85 feet, constituting it the highest point in the vicinity. The neighborhood of the spring (of which the company has acquired fifty acres)

is unpopulated and is for the most part covered by a growth of timber and low trees or bushes. The "spring" in reality consists of a large number of small springs all issuing within a small area and constituting the chief fountain head of Dow River. The maximum available daily flow has been variously estimated as being from one million to two and one-half million gallons. An analysis of this water made during 1902 at the State Laboratory of Hygiene indicated excellent quality. Further analyses will be made just as soon as samples free from the effects of the present construction work can be collected.

A collecting basin is now under construction at the springs. This will be forty feet in diameter, will be covered and will have a capacity of 350,000 gallons. Near by is also to be constructed a 300,000 gallon steel standpipe, 25'x80', supplementing the present storage, which is a standpipe at Hampton Beach 15'x90'. It is claimed that the pressure at the service taps will be not less than 40 lbs., with a maximum of 50 lbs. The pumps will be operated both electrically and by oil-burning engines, and these will be depended upon to furnish the necessary increase of pressure in the event of fire.

It is expected that the supply available from Marston Spring will be more than necessary for the total daily demand at all seasons, and accordingly active use of the present pumping station at the Beach will be discontinued, the latter being, however, kept in readiness at all times for immediate emergency use.

SALEM WATER SUPPLY.

On July 22, 1913, in company with Dr. L. F. Soule and Mr. W. E. Lancaster, members, respectively, of the Board of Health and Board of Water Commissioners of the town of Salem, an inspection was made of the general sanitary conditions of Canobie Lake, the source of water supply.

This is a lake of some 400 acres in area, the latter being about equally divided between the towns of Salem and Windham. The shores are of clean sand or gravel, and the shallows for the most part present but little evidence of living or decaying vegetable growths. Unfortunately, this is not so true at the point of intake, the bottom in this vicinity being covered with a black deposit of humus-like character.

The lake has one outlet, Policy Brook, emerging from the southeast side, a few rods below the park, the right to draw down the lake level to a certain point through this brook being owned by a Methuen (Mass.) company.

AMUSEMENT PARK.

The amusement park is located upon gently sloping ground upon the east side of the lake, occupying perhaps twenty-five acres. As it is reachable by trolley from various New Hampshire and Massachusetts points, this park has become a popular excursion resort, accommodating thousands daily during the season. In addition to a large restaurant and the usual equipment of theatre, ball ground, bazaars, refreshment and entertainment booths, and stable, there is a swimming pool of 360,000 gallons capacity.

Mr. D. F. Bowser, the present superintendent of the park, has recently been appointed a member of the local Board of Health. To his credit and that of the management, it may be said that apparently every effort is being made for the maintenance of the best possible sanitary conditions and for the protection of the lake from pollution. In this respect, conditions are undoubtedly the equal of those to be found almost anywhere—far better than at many other resorts of such character.

The sanitary arrangements are rather elaborate, and their installation has undoubtedly involved considerable expense. The drainage from both of the public toilet houses, as well as that from the kitchen and bottling plant, and a number of private closets, is conducted to a tight cesspool, or catch-basin, about sixty feet from the water. From this point, by means of a centrifugal pump, the liquid portion is pumped two or three times daily up to an elevation in the rear of the park, where it enters a series of three cesspools, constituting a septic tank. From the latter, the effluent passes to an under-drained filter bed, the final effluent reaching the brook previously mentioned.

The solid matter taken from the catch-basin about once a fortnight, is removed to a depression some 500 or 600 feet from the water's edge, where it is composted with a manure from the stables, and is eventually applied to the grass plots. This feature calls for some unfavorable criticism. In the first place, although the place where this solid matter is deposited is actually away from the lake, yet its trend is into a run which leads into the lake at a point but a short distance from the the supply intake. For this reason, the lower side of this tract should be provided with a tight embankment, for the purpose of preventing wash therefrom during showers or rainy weather.

In the second place, the practice of applying night soil to the slopes draining into the lake calls for emphatic condemnation. While there is a system of storm sewerage, the latter discharges directly into the lake; but even if it did not, it seems to me there is too great risk involved in the practice involved in the practice of fertilization mentioned. It ought to be possible to sell this manure, devoting the proceeds toward the purchase of mineral fertilizers.

The pumping equipment of the park consists of the sewage pump mentioned; the supply pump which daily removes 60,000 gallons for drinking purposes; also a 20 H. P. centrifugal pump used for filling the swimming pool. These centrifugal pumps, notwithstanding their small size and power, are remarkably efficient and are now rapidly replacing the older and ponderous piston type in pumping stations. The one in question has a capacity of 600 gallons per minute, although it occupies not more than two cubic feet of space.

The swimming pool, which is said to be completely refilled daily, is emptied through a special sewer leading into the outlet brook. There seems to be no serious obstacle to prevent the storm sewerage previously mentioned from being conducted into this line, instead of discharging directly into the lake, as at present. In my opinion, such connection should be made.

COTTAGES.

It is stated that the present number of cottages on the lake is approximately 160, 125 of which are on the Salem side. The number is increasing, as new cottages are building each season.

Proceeding from the brook to the Windham boundary a general observation was made of the sanitary conditions about the cottages on the shore, as well as visiting a few on the Windham side. Considering the comparatively thickly settled condition and the number of persons frequenting the shores, it may be stated that as a whole the situation is fairly good. While a few offenders were noted, as a rule the 75-foot requirement with respect to cesspools and closets seems to have been observed. At some points, by reason of the steepness of the slope, the drainage construction has evidently proven somewhat of a problem, although it was noticeable that in possibly a majority of cases, even where no such difficulty existed, the property holder, accepting the 75-foot requirement as an actual rather than a minimum requirement, has made the distance neither more nor less.

The water supply of the cottages is mainly derived from wells, although a number draw from the lake. The wells, which are generally of the driven type, are apt to be located on the route from the rear door to the closet, and as the general trend of the ground water is toward the lake, it would appear that in a number of instances the chances for contamination are excellent.

BOATING AND BATHING.

Naturally, the amount of boating is quite extensive. In addition to the public boat house at the park, there are quite a number of private shelters for launches and row-boats. There is also considerable fishing.

Although there appears to be some vigilance on the part of the Board of Health and the Park authorities to prevent bathing in the lake, one party having been prosecuted for this offense a few days previous to my visit, yet from conversation with various persons it would appear that this practice is still indulged in to some extent. A favorite place for bathing, one that offers comparative immunity from detection, is said to be the boat houses. However, it is asking not a little from the numerous youths and children, who are spending their days almost within falling-in distance of the water, that there shall be no bathing. While there is a standing reward for information leading to conviction, yet it is doubtful under the circumstances if anything short of three or four officers on constant duty would serve to entirely check the practice.

SOURCE AND CHARACTER OF WATER SUPPLY.

The intake is situated in a cove on the east shore, at a point slightly more than a quarter of a mile north of the park. As it is probably true that there is a general drift of the water from the north shore toward the outlet below the park, some slight protection to the quality is afforded in this fact. The mouth

of the intake is about one hundred feet from shore, and is in six feet of water at normal level. As previously mentioned, the bottom of the lake in this section tends to be somewhat muddy, and a few lily pads were noticeable. The following analysis is of a sample taken from a tap July 16, 1913, and is fairly representative of the quality:

	Parts in 100,000
Odor	Decidedly aromatic
Color .....	.18
Turbidity	v. slight
Sediment	sl. flocculent
Free ammonia .....	.0010
Albuminoid ammonia	0.0020
Nitrates	0.005
Nitrites	0.0000
Chlorine	0.45
Total solid residue	3.2
Hardness	0.3
B. coli	Negative

Although analyses have, with few exceptions, indicated a water comparatively low in organic matter and color for a surface supply, yet generally the odor, due to decaying vegetable organisms and plant debris, has always been rather decided, having been variously classed as "musty," "swampy," vegetable," "marshy," and "aromatic."

An interesting feature is the gradually increasing chlorine content, explainably only by a slowly increasing degree of seepage resulting from expansion of the shore population. Thus, starting with 0.21 parts, the amount recorded in 1901, the proportion of chlorine has steadily and almost uniformly risen until at the present time it is more than double that first noted.

The suggestion has been made that by bridging the mouth of the cove with a sand-filled breakwater, or causeway, protection would thus be afforded from the contaminating influences elsewhere, the idea being that the water in seeping or diffusing through such an embankment would be filtered from sewage bacteria. This is in effect the filter gallery idea carried out on a comparatively large scale, although the filter gallery system has been pretty thoroughly discredited, partly on account of undependable efficiency, due to channeling, partly because of the tendency of the filter layer to become impenetrable through silting up, such clogged condition being practically impossible of remedy. However, in this instance the filtering area would be relatively very large, so that, considering also the clear character of the water, the failure of an adequate volume to penetrate would be very improbable, and while there would undoubtedly be a certain amount of free passage, resulting from channeling, yet I am of the opinion that in the absence of any very extensive degree of contamination, such a device would tend to materially reduce the danger of infection. However, it should be understood that an embankment of this kind would not serve every purpose of a scientifically constructed and operated filter.

Were conditions mechanically favorable therefor, I would, considering all the circumstances, emphatically recommend sterilization of this supply during the summer months. Such a treatment would cost less than ten cents a day were it a pumping system, with the services of at least one man continuously available. On account of the fact, however, that, being a gravity supply, no daily supervision is at present demanded, and such a treatment would have to be either injected under pressure, or else applied at the pond, the problem of application is considerably complicated.

RECOMMENDATIONS.

It is recommended:

1. That the present practice of using night soil for fertilization at the park be discontinued, and, further, that the storm sewerage system be connected with the waste pipe from the swimming pool.

2. That copies of the sanitary regulations be not only posted at intervals around the shores of the lake, but that one such, in placard form, be handed to each cottage holder for tacking up in the kitchen or some other convenient place.

A large number of the cottagers are apparently not only unaware of the existence of such regulations, but are ignorant even of the fact that the lake water is a public drinking supply.

3. That the entire shore be periodically patrolled by some person during the season, one of whose duties should be the taking of a detailed census of the shore population, including also a record of the sanitary conditions at each cottage or place. Being deputized by the sheriff would give such an officer jurisdiction over both shores.

4. That the matter of protection by sterilization with bleaching powder or liquified chlorine gas be given special consideration by the local authorities, with a view to determining the feasibility of such under the conditions involved. The application of such a treatment is very much to be desired.

August 5, 1913.

EXETER WATER SUPPLY.*

On August 5, 1913, a visit was made to the filter plant of the Exeter Water Works and a conference held with officials of the company relative to a recent deterioration in the quality of this supply. The latter has been described in a previous report (Report State Board of Health, 1909-10, p. 235). During the past two months there has been considerable complaint on the part of consumers on account of the character of this water, the condition being described as "yellow" and "dirty." During the past few days the quality has greatly improved, being now practically normal.

*This report and the letter from Professor Weston following should be of interest to the citizens of Newmarket, inasmuch as the surface supply of the latter town is greatly in need of similar treatment (mechanical filtration) and the conditions here are nearly identical with those at Exeter. (See report of Professor Fletcher elsewhere.)

As this system is under the special charge and control of the engineer who constructed the plant, the matter did not come to the attention of this department, so that the nature of the trouble can only be surmised.

While Exeter is somewhat handicapped in having an inferior source of supply—the latter inclining to decided clayeyness, or “muddiness”—yet with the excellent filtration plant, there is no reason why, with proper operation, water of perfectly good quality should not be turned out.

It is obvious that the filtered water at the time of the trouble carried a considerable proportion of suspended material, representing either iron or vegetable matter. If the latter, such could have come in only from the pond, as a result of faulty filtration. Any considerable amount of suspended iron would be attributable to rusting of the mains.

Records at the pumping station show that at the present time the coagulant is applied at a rate as high as nearly three grains per gallon.* This is a relatively high rate—higher than the natural alkalinity of the water could at all times care for. As such alkalinity is not artificially reinforced, and as the latter is liable to drop very materially coincident with heavy rains—at the very times when the use of a larger proportion of the coagulative agent is imperative in order to insure perfect clarification—it is apparent that unless the treatment is very carefully adjusted and constantly watched, undecomposed alum will pass into the filtered water, a condition favorable to rusting of the mains in time, to say nothing of other objections to such an occurrence. To guard against this, it is very desirable that the engineer in charge of the pumping station be required to make periodic tests of the filtered water. The test for undecomposed alum is not complicated and can be carried out by any intelligent person.

The State Laboratory of Hygiene should also take steps to secure information as to the efficiency of operation of this filter.

BOSTON, MASS., August 18, 1913.

*Dr. Irving A. Watson, Secretary
State Board of Health,
Concord, N. H.*

DEAR SIR—Your letter of August 9 to Mr. C. H. Johnson, superintendent of the Exeter Water Works, has been referred to the writer, and he begs to submit the following information, which may be of value to your honorable board.

It must be obvious to you, as Mr. Howard's report intimates, that the water at Exeter is a very difficult one to treat, because it has a very low alkalinity, especially during flood seasons, considerable turbidity at times when high waves wash the shores of the reservoir, and a high color. Consequently it is extremely difficult, without the addition of soda, to supply sufficient sulphate of alumina or add coagulant enough at certain seasons of the year to remove the color, turbidity and bacteria to an adequate

*This statement is based upon some figures secured at the pumping station, it being represented that on the date in question the sulphate of alumina consumption was 125 pounds per day, while the hourly pumpage averaged about 23,000 gallons. Pumping thirteen and one half hours—the period as stated—this would be equivalent to 2.8 grains alumina per gallon.

degree, and at the same time prevent undecomposed sulphate of alumina from passing the filters.

Since January, 1913, the plant has been under the supervision of the writer. Data is being accumulated which will enable the management to avoid the difficulties on either hand, and to maintain a safe course.

Enclosed herewith please find an analysis* sheet giving the results made in the writer's laboratory since the first of January. You will note that these results show at times both the effects of adding insufficient amounts of sulphate of alumina to remove the color, and of adding so much (April) that the water contained free sulphate of alumina.

The trouble in April, due to the addition of more coagulant than the water could decompose thus lead to a reduction in the amount of coagulant. This amount proved insufficient for the removal of the color, consequently vegetable coloring matter came from the filters in a colloidal, uncoagulated condition, and deposited in the distribution system subsequently. The difficulties mentioned in your letter, therefore, were due to the use of insufficient sulphate of alumina rather than the reverse.

The only record which we have of the passage of undecomposed sulphate of alumina into the mains was during April, 1913. Since the filters were started in 1906, there has been only one other occasion where there has been any evidence of any undecomposed coagulant reaching the distribution system.

In view of the facts, your suggestion to have the filter attendant test the alkalinity of the water daily will be adopted immediately. A simple test to determine whether the alkalinity is greater or less than ten parts per million has been devised, and instructions will be given the attendant to notify this office whenever the alkalinity of the filtered water falls below ten parts per million. The test of the alkalinity at Exeter has been thought of before, but on account of the filter attendant's lack of chemical training, was not considered feasible; the devising of a simple test will make it so.

The Exeter water requires about 2.5 grains of coagulant per gallon for one hundred parts of color per million. There have been added to the water on the average, since the first of January, the following amounts of sulphate of alumina:

AVERAGE AMOUNTS OF SULPHATE OF ALUMINA APPLIED TO THE WATER AT THE
EXETER FILTERS.

Month	Ave. grains per gal.
January	2.03
February	1.69
March	1.87
April	1.91
May	1.64
June	1.69

At present about 2.20 grains per gallon are being added. There is no record of more than this being applied to the water at any time since

*Incorporated with other analytical data under "Exeter."

January first. Amounts added during May and June were insufficient for the removal of the color, and some coloring matter passed the filters. Furthermore, no coagulant was applied to the water for a few days during May, in order to make some repairs, and some of the deposit from the pipes may be due to organic matter which passed the filters at that time.

During July the reservoir suffered greatly because of the growth of *asterionella*. This growth was destroyed by the addition of a small dose of copper sulphate. At the same time the coagulant was increased from about 1.7 to about 2.2 grains per gallon. You will note by comparing sample No. 2241 with No. 2323, collected before and after changing the amount of coagulant respectively, that comparatively little increase in the amount of sulphate of alumina brought about a satisfactory removal of color.

It is probable that at certain seasons of the year the addition of soda may be necessary to permit the addition of sufficient sulphate of alumina to effect satisfactory purification of the water. I understand that the company is prepared to do this. The company has also given orders for an air agitation system, so that the filter sand may be stirred during washing with jets of compressed air, and the removal of odors due to any chance growths of organisms in the reservoir be facilitated. It is expected that this new device will be ready for use this month.

One more point might be mentioned, namely: that the water at Exeter can stand an unusually large dose of sulphate of alumina, because the reduction of alkalinity per unit of coagulant is unusually low.

Yours very truly.

ROBERT SPURR WESTON.

PEMBROKE.

The 1913 session of the legislature having granted the town of Pembroke a charter to construct a system of water supply from Pleasant Pond, an investigation of facts relative to this source was made on August 19.

Pleasant Pond is situated near the northern boundary of the town of Deerfield, lying partly in this town and partly in Northwood. Hitchcock's "Geological Survey" gives the area as 490 acres. Its major axis extends very nearly north and south, the greatest length being about one and eight tenths miles, the greatest width, three fourths mile.

The pond is fed mainly by springs, there being no entering brooks of size. The shores throughout their whole extent are very clean, and it seems evident that the whole basin is overlayed by sand or gravel. A sample of the water, collected February 15, 1913, from the northern extremity through a hole in the ice, gave the following analysis, this being compared with those of two samples submitted from the Suncook Water Company's supply—one collected at about this date, the other three months later.

	Pleasant Pond (10765)	Suncook Water Company (10771)	(11062)
Odor	v. slight	marshy	aromatic
Color	0.05	0.80	1.40
Turbidity	none	slight	none
Sediment	v. slight	none	slight
Free ammonia	0.0010	0.0010	0.0010
Albuminoid ammonia.....	0.0110	0.0085	high
Nitrates	0.005	0.005	0.010
Nitrites	0.0000	0.0000	0.0000
Chlorine	0.30	0.18	0.15
Hardness	0.7	0.1	0.1
Total solids	3.2	4.0	3.7
Fixed solids	1.5	2.3	1.9
Colon bacilli	negative	negative	negative

A noticeable difference in the character of the two supplies is in the very much higher color and content of organic matter in the latter source. In the case of the Pleasant Pond water the degree of color is as notable low as it is extraordinarily high in the case of the Suncook Water Company samples. It may be remarked that the proportion of nitrogenous organic matter in the one sample of Pleasant Pond water submitted is somewhat above the average. This, however, is a value that is liable to considerable fluctuation. Both sources represent exceptionally soft water.

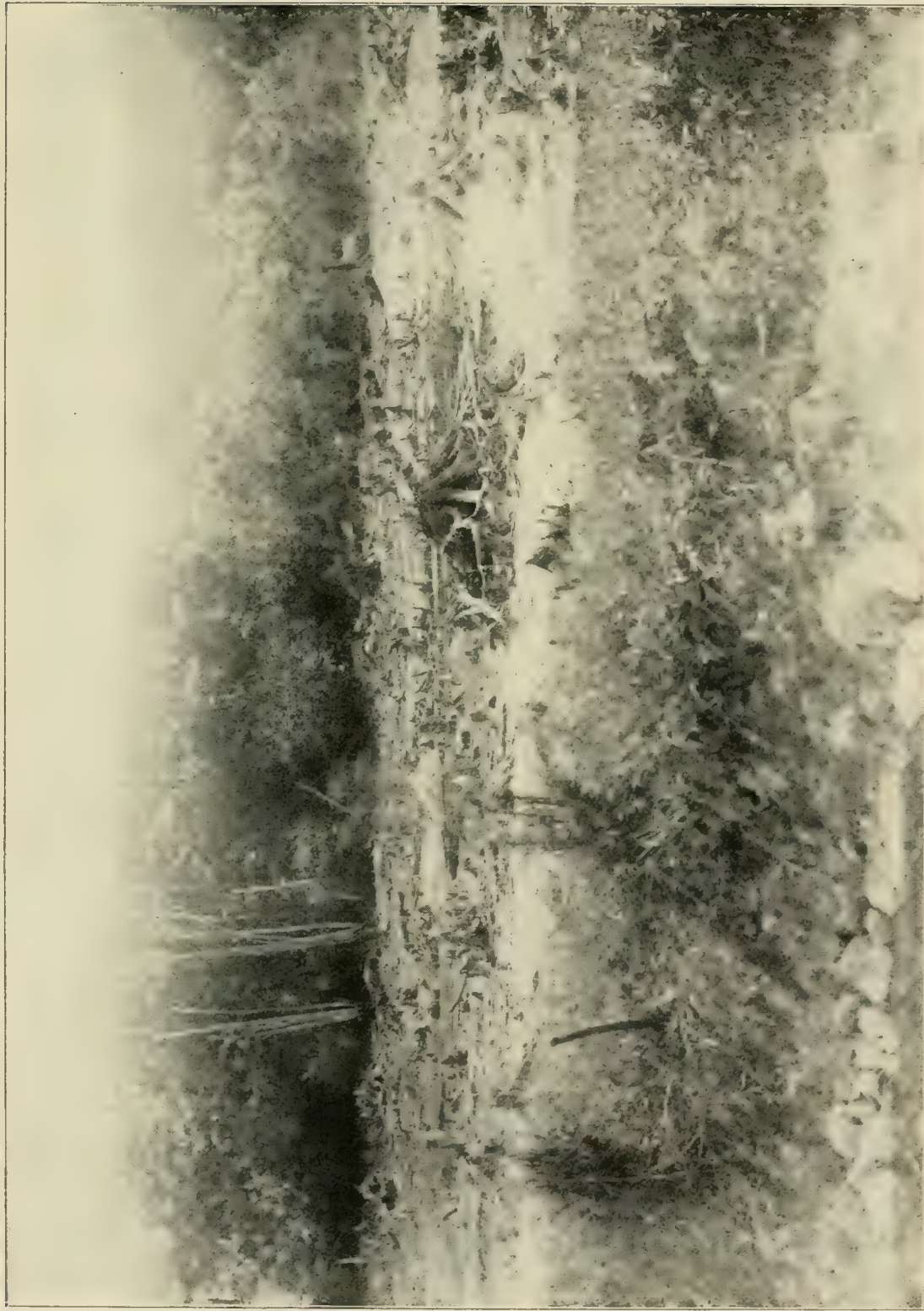
The gently sloping water-shed of Pleasant Pond, amounting to approximately four square miles, consists largely of woodland, with relatively little cultivated land. The eastern shore is wooded throughout the entire length, with some pasturage beyond. The western shore includes more open land, the latter, however, being apparently neither very actively cultivated nor pastured to any appreciable extent. On this side there are four or five sets of farm buildings, including one "abandoned" property. From but one of these is there any possible likelihood of objectionable drainage reaching the pond; while such an occurrence would seem to be of rather remote probability, the conditions are easily controllable.

While conditions throughout the water-shed back from the pond are therefore very satisfactory, one less favorable circumstance is to be found in the nucleus of a "summer colony" already established upon the shores of a pond. Because of the sparsely settled surroundings and the isolated, rather inaccessible nature of the locality this place has evidently remained "undiscovered" for the most part until comparatively recently, and progress in cottage and camp building has not as yet attained any serious proportions.

At present there are some ten to twelve cottages located on or near the shores. A number of these were visited by me and the sanitary arrangements found to be satisfactory in every case. As the number of cottagers is liable to materially increase in the near future unless the necessary steps are taken to discourage their influx, it is desirable that regulations for the protection of the purity of the water be promulgated at an early date.



Another view of a water supply reservoir, locally known as the "Bull-Frog's Paradise." The condition illustrated is one reason why the town is now installing a system of its own.



Bottom of a distributing reservoir, water drawn off. No expense incurred here for removal of trees, stumps, etc., previous to flowage. (See page 185.)

The intake will be at the northern extremity, in front of the highway, and at about two hundred feet from the shore. At this point the Suncook mills has a dam with gate for the purpose of regulating and controlling the volume of flow in Suncook River (through Suncook Pond, immediately below). The distance from this point to Suncook Village is about thirteen and three-fourths miles.

The matter of bathing in this pond is something calling for early regulation, especially as a popular place for this act is the very shallow water in the immediate vicinity of the proposed intake.

It is planned to convey the water through 12" wood stave pipe, suitably iron-bound and treated upon the outside to resist decay. With the elevation at the pond of about two hundred and fifty feet above Suncook Village, it is estimated that the water can be delivered at this point under a pressure, making due allowance for friction, of not less than one hundred pounds, thereby affording good fire protection for Pembroke Street as well as for Suncook and Allenstown.

It is understood that construction will not be commenced before next spring. Incidentally it may be mentioned that the charter under which the town will operate contains a provision requiring that the latter take over the property of the present Suncook Water Works. Upon request of the secretary of the local health board, a visit was made to this company's reservoir on the same date. A description of the latter will be found in an earlier report (S. B. of H. Report, xx, p. 142).

This supply was installed some fifteen years ago by the late Frank Jones, being subsequently taken over by a stock company. There are two sources, (a) Cold Spring Brook, a fairly satisfactory water, although rather highly colored, and (b) Bear Hill Pond, distant in a direct line southeast of the village about four miles. The latter source is said to be muddy, and the water highly colored. A small brook brings the water down to the reservoir, formed by the damming of an unstripped swamp tract. The lower end of this reservoir is underlaid by Akron pipe covered by a layer of sand and gravel, through which the water is intended to seep before entering the intake reservoir formed by constructing a second dam a few feet below the first. Into the latter chamber, known as the reservoir proper, the water of Cold Spring Brook is also pumped.

On the date in question the storage reservoir had been drawn down nearly dry and men were engaged in cleaning the sand layer near the dam. The photographs submitted herewith illustrate well the character of the impounded area. As nearly as could be learned, this filtering layer is cleaned only at long intervals; in any case, its value is no greater than that of a strainer for holding back suspended matter, and it is evident that some water goes through without even this degree of clarification.

In addition to its main pumping plant for raising brook water to the reservoir, the Company, in January, 1911, installed an emergency pump at the dam on the Suncook River. It is said, however, that this source has never been resorted to upon but one occasion—that of a fire. Although nominally maintained for fire purposes only, yet it has been pointed out that it could be of no

value in the event of any considerable conflagration, for the reason that such a circumstance would involve the cutting off of the current by which the pump is operated. We desire to emphasize that if there is any future likelihood whatever of Suncook River water being injected into the mains pending the installation of the new supply—a circumstance which now seems to be rather improbable—this river pump should be provided with a chlorinating equipment, i. e., of some means of injecting a solution of chloride of lime into the suction pipe.

For the installation of the Pleasant Pond system, the town of Pembroke voted to issue bonds in the amount of \$200,000. Various difficulties have been encountered. At the outset, the town and the existent water company failed to agree in the matter of the price to be paid for the old system, with the result that an appeal to the court became necessary, the amount of damages being finally determined by a jury. Subsequently an attempt was made to restrain the town from commencing construction, on the alleged ground that the proposed size of main would not provide adequate fire protection. Eventually these difficulties were cleared up, and at this date we are informed that substantial progress has been made in construction.

HAVERHILL.

Pursuant to a request made by Mr. A. K. Merrill, chairman of a special committee appointed to select a water supply for the precinct of Haverhill, a visit was made to that town on August 15, 1913, and in company with Mr. D. J. Winn, the proposed source examined.

This inspection was supplemented by another visit on August 25, on the evening of which date your representative also attended a meeting of the precinct, and explained certain matters relative to the quality of the proposed supply. The latter consists of springs, located on and just beyond the Morris farm, so-called, somewhat more than two miles southeast of the village.

These springs are situated a short distance below the mouth of a deep ravine leading from the top of the divide on the east. An area of three or four acres below the ravine consists of very wet soil, the run off from which is considerable. While the immediate slope is toward the west, there is also a general slope to the south, so that in the case of the first and third sources mentioned the line of drainage is not coincident with a line connecting these points of collection.

The first sample (No. 11444,) was taken from the barrel enclosing spring situated in the fork of the roads a few rods above the Morris place. Cattle are watered here daily and, as a result, present conditions are not very clean. The analysis afforded by this sample was not favorable; an excess both of organic matter, nitrates and chloride being indicated.

August 18 another sample (No. 11451) was taken by Mr. Winn from a small basin scooped out in the ravine at a point about fifteen rods above the roadside spring. The results were even more unfavorable than in the first case. Accordingly, on August 19, two more samples were collected, No. 11463

being from a spring located a few rods below the first source examined, while No. 11464 was taken from the outlet of a "blind" drain in the open field still farther down the slope. From the source of No. 11463 a pipe conveys water to the Morris farm buildings.

Both the latter samples proved to represent water of excellent character in all respects except for being a trifle harder than the average. Although issuing from open mowing land, there was no evidence of any contamination. The content of chlorine was found to be practically normal, while that of nitrates was even below normal for pure water, being practically nil in each case. The soil seems to be a clayey loam, and it is rather doubtful if the degree of hardness is attributable to any great extent to cultivation, although it is impossible that by future non-fertilization of the tract in question, the hardness would eventually become somewhat diminished. It should also be borne in mind that the degree of mineralization is at its maximum at this period.

It has been generally supposed that all this water is from the same "vein" and that it comes originally from Lake Tarleton. Careful examination shows that there is a natural divide, slight but distinct, extending diagonally across the general slope and separating the first two springs sampled, from the last two. While this would serve to explain the difference in character observed between the two groups of springs, i. e., that they are totally different waters, yet another explanation is in the probability that the ground water flow is not through a single "vein" but is represented by a sheet of considerable area, and that in the first two instances the contamination noted, local in character, is confined to a relatively small portion of the total water sheet, such portion being deflected to the south of the main flow by the divide mentioned.

With the exception of one farm, situated for the most part to the south of the ravine mentioned, there are no farm buildings and no arable land above this spring tract. In case of the one barn, the drainage is altogether into another watershed to the south. It is stated, however, that in recent years quite a number of carcasses of cattle have been deposited in the ravine above the first springs sampled, and this fact serves as about the only apparent explanation of the high nitrate content noted. If this is their origin, such a situation is of course but temporary in character, and it would appear evident that in the event of the precinct eventually wishing to extend its source of supply—an improbable circumstance—not only could these first mentioned springs be readily utilized, but a dam could easily be constructed across the deep gorge just above, the resulting reservoir serving most admirably as storage for emergency, although subject to a certain amount of field drainage from the farm referred to.

It is planned to conduct the water to a covered concrete reservoir, to be constructed at a point a little less than a half mile nearer the village and at eighty feet lower elevation than the springs. This reservoir will be 60'x25'x13' deep, with a capacity of slightly less than 150,000 gallons. The elevation is sufficient for ample fire protection. While no figures were available as to the definite amount which these springs will supply, yet it is claimed by the engineer who made the survey that there will be an abundance.

The situation therefore may be summarized by stating that the Morris springs would provide a supply of excellent quality as regards organic purity, safe and satisfactory in all respects with the possible exception of hardness, the latter being above the average for our New Hampshire supplies, although not prohibitive in degree. This feature as well as others bearing upon the quality was carefully explained by me at the precinct meeting. At this meeting, on August 25, the precinct voted to purchase this supply and to issue bonds therefor in a sum not exceeding \$20,000, such action being conditioned upon securing the approval of the State Board of Health of the source in question.

It may be stated that but one other source was considered, this having previously been rejected by the committee from both sanitary and engineering considerations.

The analytical data obtained on the four samples from the Morris location is appended herewith.

*Analyses of samples collected from springs on the Morris location.
 No. 11444 collected August 15 from barrel over spring by roadside.
 No. 11451 collected August 18 in ravine about 15 rods above source of 11444.
 No. 11463 collected from spring in Morris field a few rods below No. 11444.
 No. 11464 collected from outlet of "blind" ditch in Morris field.

	No. 11444	No. 11451	No. 11463	No. 11464
Odor	dist. earthy	dist. earthy	None	None
Color	0.05	0.03	0.00	0.00
Turbidity	v. slight	sl. earthy	None	None
Sediment	slight	sl. earthy	None	v. sl. flocc.
Free ammonia.....	.0022	.0054	.0012	.0004
Albuminoid ammonia.	.0060	.0058	.0016	.0012
Nitrates .....	.075	.125	.004	.002
Nitrites .....	.000	.000	.000	.000
Chlorine .....	.30	.25	.14	.11
Solids .....	.....	12.5	9.2	10.0
Hardness	6.9	7.1	6.0	5.3
Iron .....	.....	0.03	0.01	0.01
Colon bacilli	Doubtful	Negative	Negative	Negative

MERIDEN.

On September 10th, Mr. C. A. Tracy forwarded a sample of water taken from a spring under consideration as an additional source of supply for the village of Meriden. The analysis of this sample proving not quite satisfactory in certain respects, also in view of the law relative to inspection of new sources of supply, I went to Meriden on September 17th and made an examination both of the present and proposed sources of supply.

The present system of the Meriden Water Company includes two reservoirs located in pasture land slightly more than a mile northwest from the village.

*See also No. 10930 collected April, 1913, from tap on present Haverhill Aqueduct Company System.

The lower and larger reservoir, which is absolutely dry at the present date, consists merely of an uncovered and unwalled excavation situated but a few feet from the highway. This elevation is said to be about fifty feet above Richards Hall, original capacity (now materially reduced by sliding in of the walls) estimated at about 15,000 gallons. This reservoir is fed by a spring in the bottom, also by a well located in the rear of some farm buildings near by. It undoubtedly receives a considerable amount of surface wash from the pasture slope above, and as it was apparently originally only an emergency affair, affording water of indifferent quality, it should be abandoned following installation of the new source.

The other reservoir, the original one of the system, is situated at about fifty feet higher elevation, and is covered and well constructed from granite and cement. At the present time the tiny stream trickling in from the half dozen nearby wells that feed this reservoir hardly amounts to more than a gallon a minute. In short, the total amount of water available from the whole system is scarcely enough to operate the flush closets in the village, and water for drinking purposes at the Academy is now being carried from private sources.

The community of Kimball-Union Academy, numbering about 200 persons, is the principal consumer. The total population served is probably not over three hundred persons, and the total daily consumption is estimated at about ten thousand gallons.

Subsequent to shipping the sample referred to it was decided to proceed further away and take the water of a brook flowing out of Corbin Park. The present proposed point of intake is one-half mile below the Park fence, is one mile from the Academy, and with the elevation above the latter of about fifty feet, will afford a gravity pressure satisfactory for general domestic use, although unfortunately insufficient for fire protection. By going further back on the stream, however, the pressure might be considerably augmented; incidentally it may be suggested that the economy in constructing a main as small as 2" (galvanized iron) is open to question.

The water-shed of this brook is wholly wooded and there is no pasturage—at least of farm animals. The fact that roaming over the 15,000 acres constituting Corbin Park there are some 300 wild boar as well as about 75 buffalo, may be taken into consideration, although it seems doubtful if this is likely to prove any serious source of pollution. The fact that the analysis of the sample taken at this time of low water, when the animals would be most likely to impart contamination, is entirely satisfactory both chemically and bacterially, is confirmative of the above view. Notwithstanding that there has been no rain of any consequence in this section for a very long period, the flow of the brook at this time is considerable and will afford a supply abundant for the needs of the village.

The brook bed is gravelly and clean, and the water very clear and attractive in appearance. A sample collected at this date afforded results as follows:

Odor	none
Color	0.05
Turbidity	none
Sediment	v. slight
Free ammonia	0.0002
Albuminoid ammonia	0.0050
Nitrogen as nitrates	0.001
Nitrogen as nitrites	0.0000
Chlorine	0.07
Total solids	3.5
Fixed solids	2.3
Hardness	1.6
B. coli	negative

While the water is not biologically objectionable there is some growth of algae identified as ulothrix noticeable on the rocks in places. This, however, will scarcely affect the quality of the water. As a surface water, the above indicates unusual excellence in the low degree of color and organic matter. In fact, it will compare very well indeed with the spring water constituting the original source of supply, and in my opinion it is better than that afforded by the present lower reservoir.

CHARLESTOWN.

On October 21, 1913, in company of two members of the Board of Water Commissioners, an examination was made of conditions on the water-shed of the Charlestown village water supply.

The source consists of a small brook on which two reservoirs are situated at a distance of about three miles north of the village. The lower reservoir is small (about one third acre), and at the present time the feeding brook amounts to but a mere trickle, such brook in fact disappearing altogether a short distance above. The main reservoir is located about a half mile further up and includes an acre or more. The shores of this reservoir have recently been cleared, and I found conditions clean and satisfactory.

The brook which feeds the main reservoir is not more than eighteen inches across, and on the date in question was probably discharging less than twenty-five gallons per minute. The conditions on the lower end of this brook are bad. Just above the point where it discharges into the reservoir is a set of farm buildings. A henyard runs down to and includes the brook, the slope being about forty-five degrees, with henhouse about seventy-five feet from the water; loose soil. Immediately back of the henhouse and also sloping toward the brook are two pigpens, while overhead there was in process of construction a tie-up for cattle, the intention being to discharge the manure from the latter into the pens. Adjoining the latter is also a privy—all on a slope toward the brook, and at a distance of not more than one hundred and twenty-five feet therefrom.

A few rods above this place a second cause for complaint was noted in connection with another set of farm buildings. This consisted of a pigpen situated immediately on a small brook tributary to the water supply and not more than seventy-five feet therefrom. Though dry at the time, this water course must carry considerable wash into the main brook during rains or wet periods. At such times, there is also chance for manure drainage from a nearby barn, the location of which slopes sharply toward the hogpen brook.

Still further above, the main brook flows through pasture land which affords grazing for over one hundred head of cattle. The latter use the brook as a drinking supply, and there is nothing to prevent their wallowing in it.

Bearing in mind the small size of the brook, it will be appreciated that during rainy periods an appreciable amount of contaminative wash must necessarily enter; while the fact that cattle have access to it introduces an additional factor of pollution—and a most objectionable one at times when the brook is very low. Examination of samples collected in this neighborhood a few days later, during rainy weather, serves to confirm the correctness of this view, although the latter is sufficiently apparent without any analysis.

As a remedy, no satisfactory alternative can be seen but the purchase by the town of the set of farm buildings first mentioned. At the second farm, the owner can undoubtedly be compelled to remove the hogpen and take care of the barnyard drainage, upon due notice. With regard to the pasturage—the least serious feature at present—it should be feasible for the town to purchase a few rods area on either side of the brook and furnish the owner with a substitute water supply for his cattle.

BELMONT.

Complaint was made to the State Board of Health that a certain party was depositing logs near the brook from which the water supply of Belmont is taken, and that it was the intention to establish a sawmill there to cut a large amount of lumber, and a request was made that action be taken to prevent the proposed work, as it must necessarily endanger the water supply.

In order to determine the exact situation, the chemist of the board was requested to visit the locality, which he did, and rendered the following report:

On January 30, 1914, an investigation was made of the circumstances involved in the deposit of a lot of logs on the bank of a small stream used in part as the source of supply for the town. It is the intention of the party concerned in this case to haul to this site a total of about 200,000 feet and here to saw these logs into lumber during the coming spring.

These logs are deposited on a semi-peninsula formed by a sharp bend in the brook, on land sloping from thirty to forty degrees. Many of the

logs are quite close to the brook, less than 100 feet. Between the slope and the brook, there is a strip of intervalle varying from 20 to 50 feet in width. It is now proposed to erect the sawmill at a point on the slope near an apple tree, probably 150 feet from the brook at its nearest point, such point being some 200-300 feet above the present intake. It is claimed that the sawdust will all be removed within a year's time, and that precautions would be taken to prevent such getting into the brook. At the present moment there are said to be about 100,000 feet of timber on the spot in question, which is practically within the village limits. The owner's farm, with buildings, are but a few hundred feet away—just across the brook.

Water from the latter is pumped to a reservoir about a mile distant, the supply being supplemented by wells. The engineer informs me that the pump, which has a working capacity of 55,000 gallons per minute, is operated from two to four hours per day—not every day of the year but on the majority of such. While there are, unfortunately, no pumping records, yet from all the testimony it is clear that this brook forms a considerable and rather constant part of the general supply and that it is an important part thereof, although this point the affected party disputes.

From a consideration of all the circumstances, I am of the opinion that the operation of sawing up the lumber on the plot in question, together with all that is involved, would endanger the quality of the water supply. The reasons for this view are sufficiently apparent and have, in fact, already been discussed orally with you.

The party who was proposing to go into the lumbering operations as described above, appeared at the office of the State Board of Health for a hearing in the matter. After discussing the entire subject, he agreed to remove the logs to an unobjectionable locality, and to abandon entirely the idea of establishing a mill upon the banks of the brook, as was at first contemplated.

A second report was subsequently made by Mr. Howard, as follows, with recommendations for the protection of the said water supply:

In connection with a partial inspection of the supply of the Belmont Water Works, made January 30, 1911, the following facts appeared:

The original, and possibly today the larger part of the supply, is derived from wells. There is, however, a brook flowing in a northwesterly direction, and situated rather closely at the intake to one of the residence streets, from which an important share of this supply is derived. The pumping station is located on one of the village streets. Pumping is at the rate of 55,000 gallons per minute, to a reservoir about one mile distant, and it appears that this source is in use rather constantly throughout the year.

The brook, which is some six or eight feet wide, flows between steep slopes of open grass land. On the west side there are two sets of farm buildings, drainage from which is liable at times to enter the brook above the intake. In addition there is also said to be a twelve-inch culvert which carries excess water across the street into the brook above the intake, such water representing ordinary cultivated field drainage, although there is a likelihood that more or less filtered barn drainage from one of the farms also gets in.

On the other side of the brook and but a short distance therefrom up a moderately steep slope runs one of the village streets. Here are one or two barns and three or four residences, the situation being such that there is liability, especially at certain times, of sewage reaching the brook from these places. The worst place noted is situated upon a very steep bank opposite a point in the brook some four or five hundred feet above the present intake. Both the privy and the cesspool are so situated, that not only does the drainage therefrom necessarily have a short and direct course into the brook, but heavy rains are at times bound to carry down wash from these places.

It is true that the analyses made from time to time of this water (it does not appear that we have had many samples direct from the brook) have not shown any positive evidence of contamination since 1908. Prior to that time, however, the records do show five instances when sewage bacteria were found to be present, although it is not clear whether brook water was a constituent of all the samples so involved. However, this may have been, the fact that the water may have proved good analytically on some given date, should not be permitted to outweigh the existence of unsanitary conditions, involving serious liability of contamination of the supply at some times, even though perhaps not at all times.

In my opinion, the town should take early action toward extending its intake pipe up the brook to a point well above any danger of serious contamination. As the necessary distance would be inconsiderable, this would involve no very great item of expense.

It was suggested in a communication to the Board of Selectmen of the town that an article be inserted in the warrant for the town meeting for an appropriation and authority to extend the intake pipe to a point beyond all danger of pollution.

FRANKLIN.

The following record of facts in regard to the recent installation of an emergency hypochlorite outfit for water treatment at Franklin is submitted:

Owing to a shortage in the regular supply, application was verbally made for permission to augment the latter by direct pumpage from the Pemigewasset River, also for the use of an emergency outfit as described on page 61 of the July-October, 1913, Bulletin.

Accordingly I went to Franklin on February 14 for the purpose of determining conditions, and on the 17th returned and installed the outfit, the latter having been forwarded in the meantime.

The normal supply is derived from two sources (a) a group of springs and wells commonly referred to as the Coldbrook Springs, affording a daily yield of 60,000 to 100,000 gallons, and (b) a combination of tubular well water and of filtered Pemigewasset River water accumulated in such wells and pumped to what is known as the No. 2 reservoir. From the latter it flows by gravity to the main (Bow St.) pumping station, where it mingles with the Coldbrook Springs water and is thence pumped to the No. 1, or distributing reservoir. It is claimed there are no services attached to the filtered river system prior to reaching the Bow St. station. Pumpage at this place is by water power and is continuous for the twenty-four hours. Normally, the daily amount pumped is said to vary between 150,000 and 200,000 gallons, but at this time, on account of the severely cold weather, the pumping record for the week ending February 14 had shown a range of from 240,000 to about 300,000 gallons.

Recent analyses of Pemigewasset water do not indicate any condition of gross contamination at the point of intake. The chief point at which sewage enters is at Plymouth, some twenty-four miles above. While no detailed survey has as yet been made, it seems improbable that any great amount of sewage is discharged below this point. The chemical analysis of a sample of the raw water collected February 12 shows it to compare very favorably with the average surface water supply in general character. No reaction for coli was afforded by a 1cc test, but the 10cc test was positive. Samples for bacteriological examination subsequently collected have shown a remarkably low bacterial content. It seems rather probable that such must be abnormal findings, due to the extremely cold weather then existing. These river samples afforded positive results for colon bacilli on the 10cc test, those using 1cc being "doubtful."

It is learned that it is not the custom to clean the filter at all during the cold season. Consequently, the embarrassment incident to freezing weather and ice accumulation encountered in the case of the average supply in this latitude using an open filter is not met with here. Nevertheless it seems quite possible that failure to afford the normal amount of effluent at this period may be due in part at least to a stiffening up of the sand bed. The reason that cleaning is not necessary except at infrequent intervals at this plant is due in part to the fact that a comparatively large filtering area is available for the volume of water filtered, the rate per acre per day being exceptionally low; (b) to the fact that a settling basin of generous proportions allows of a preliminary removal of most of the sediment and much of the bacteria. A third reason is in the fact that the raw source is much cleaner than is true, for example, in the case of the Somersworth supply.

While the logical point at which to establish a sterilization treatment would of course be at the river station, yet because of the somewhat crowded condition of the latter, it was agreed that the outfit might be installed, temporarily at least, at the main station, thus sterilizing the

whole of the supply. The only objectionable feature in this location was in the fact that it involved the collection of raw river water in the small storage reservoir, and to obviate this difficulty it was directed that the treatment be continued for two days following cessation of river pumping.

Previous examination of two samples of Acme Chloride of Lime (A. Mendleson's Sons) showed a net weight per can of slightly less than 12 ounces, with a chlorine strength of approximately 33 1/3 per cent. It being determined that a treatment of .25 to .30 parts chlorine per million would be sufficient, it was accordingly directed that the contents of two and one half cans be dissolved in the fifty gallons of water and delivered into the pump well at the rate of two gallons per hour during the twenty-four hours' run. From the results on the single set of samples thus far examined, it would appear that this treatment is sufficient.

Subsequently this office has been advised that it has been decided to find a place for the sterilizing equipment at the river station. As here the pumpage is triple the hourly rate at the Bow St. station (500 gallons per minute), and the daily period but one third, it was directed that the same solution be continued, delivering into the suction pipe at the rate of six gallons per hour. It is anticipated that direct river pumpage will not be necessary after the cessation of cold weather, and at present it is not demanded continuously.

PLYMOUTH WATER SUPPLY.

The town of Plymouth having decided to make an extension of its water supply system, the situation was examined on April 6, 1914, the following facts being ascertained:

The main system has its source in twenty-seven shallow wells draining into two reservoirs located about two miles west of the village at such elevation that a pressure of approximately eighty-five pounds is afforded.

These wells, which are located in woodland, vary from six to ten feet in depth, and are brick-lined and provided with stout wooden covers. From the bottoms of them the water is piped into an open channel which conducts into the reservoirs.

While it is represented that this channel is cleaned from decaying leaves, etc., once each year, yet it is apparent that with the present system of tree cultivation close to the ditch, considerable material must fall therein which adds to the color and organic content of the supply somewhat. Also, during the melting of the snow in the spring, a certain amount of objectionable matter is carried into the reservoir in this way.

While the ideal arrangement would involve the piping of this water into the reservoir, yet the open channel doubtless serves the purpose fairly well as it is, although it would be an improvement to cut back the growth on either bank a few feet—just sufficient to reduce somewhat the contamination from dropping leaves and twigs, yet without unduly exposing the brook flow to evaporation through too great admission of sunlight.

The superintendent, Mr. Fogg, states that it is his practice to draw down and clean the bottoms and sides of these reservoirs in alternate

years. The latter are well constructed, with rubble walls. The estimated capacity of each is about two million gallons, a volume greater than is apparent from casual observation.

The present well system, however, fails to supply sufficient water, even with the storage available, for warm weather needs, and about two years ago an auxiliary supply was added, consisting of six wells excavated on an intervale lying between the Pemigewasset and Baker Rivers at a point a short distance above their confluence and about a half mile north of the center of the village.

The one-acre tract on which these wells are located and which represents all of the intervale that is owned by the town, is situated a few feet to the east of a terraced bank, on the edge of which are the Foster peg mill and a row of four tenements, the latter being provided with earth closets and all being within about 150 feet of the wells. There are no buildings and no cultivated land on this intervale. The wells are about six feet square and eight to twelve feet in depth, being covered with about three feet of soil. The latter is of very loose, porous character, consisting of a reddish gravel, overlaid by a black muck-like surface stratum, and there is a belief that the whole intervale is saturated with water from the Pemigewasset River, this belief being based upon the assertion that the level of the water in the wells tends to rise and fall with that in the river. It seems quite possible that there may be some penetration of the ground water current from river to river and that such current is considerably influenced by the latter. However, the distance from the wells to the rivers is several hundred feet in either case, and any water seeping therefrom would be well filtered.

Both systems having failed to supply the volume of water needed, the present proposition is to sink some additional wells in the intervale tract. It should be stated that in this auxiliary system, which is said to afford about 75,000 gallons daily, the water is pumped directly into the mains against the gravity pressure by a pump owned by the town, but operated by the peg mill, such counter pressure being sufficient to carry the well water up into the reservoirs.

To such extension two possible objections may be considered. First. That at times of high water, this whole intervale, including the well tract, is liable to overflow. Such overflow occurred during the spring following construction, and at that time resulted in the caving in of the earth covers of two or three of the wells. The tract was again overflowed during April of this present season, following my visit. The chance of contamination is in the fact that considerable sewage, mainly, however, industrial in character (pulp waste) is discharged into the Pemigewasset River at points above. There is, however, no reason why a substantial covering could not be constructed for these wells so as to prevent any direct inflow of water at such times.

Our examination of two samples of this water, drawn April 28, a few days after flooding, indicated in a general way water of excellent quality. It is true that the first sample drawn from the pump did afford a positive color reaction on a 10cc. test (not on 1cc), but it is not con-

sidered that this of itself should be regarded as a factor of serious significance. The second sample, collected after about an hour's pumping, was negative on both 1cc. and 10cc. tests. The water was entirely without color, clear, with but little if any odor, and with a minimum of organic matter.

But even assuming that flooding of the intervale does constitute a menace to the quality of this well water, it should be noted that this source is used only during the summer season, when high water does not occur.

The second possible source of contamination is from the peg mill itself and the contiguous tenements. It was noted that a continuous trickle of water, representing condensed steam and oil-impregnated boiler waste, issues from the bank above and subsequently seeps with noticeable abruptness directly into the ground from a small pool which forms within fifty feet of the nearest well. It is stated that every two or three days this waste discharge is very greatly augmented through the sudden drawing off of five or six thousand gallons of water representing the contents of a tank in which the birch logs are given a soaking treatment. It is true that the chief contamination of such water consists of fibers and resinous matter washed out of the wood; yet the abrupt discharge of such a large volume of water in the immediate neighborhood of the wells, where it must necessarily at once penetrate to the ground water level, is objectionable.

In conclusion, while the conditions immediately adjoining the present well tract on the intervale are far from ideal, yet past analyses have indicated that these wells are affording water of a very satisfactory character, and the quantity available in this way seems to be susceptible to material further increase. In view, therefore, of the character of this water, I am reluctant to make any recommendation amounting to condemnation of this site as a source of further supply, justified though such a recommendation possibly might be on the basis of the local conditions.

If the town particularly desires to extend its supply from this source, it is believed there need be no objection, if the condition be made that the discharge of waste from the peg mill be discontinued from its present course and be carried off in a reverse direction toward the Baker River—something which appears to be entirely feasible to carry out.

There should also be a strict supervision on the part of the health officer over the waste disposal from the tenements, i. e., the closet receptacles should be of tight construction and be kept properly cleaned; also the sink drainage might very properly be conducted into the rearranged mill sewer, as above prescribed.

It would, further, be well for the town to purchase more of the intervale tract, with a view to constructing the new wells further to the east of the mill property.

Yet, while sanctioning the proposal to extend the present water system in this way, I desire to emphasize the opinion that the best and most logical course would be in seeking to secure the necessary increase at the main source. Not only would this obviate the expense of pumping, but it would afford a supply entirely free from the stigma which necessarily

is inseparable from a source where the surroundings are of the character true of the lower system. It is quite possible that sufficient further extension of the main well system would involve considerable new construction, yet in considering the expense not only of this but of piping some one and one half miles a mountain brook source said to be available at this distance, the off-setting cost of daily pumping in the case of the lower well system should not be forgotten.

NEWMARKET.

HANOVER, N. H., July 4, 1913.

MR. GEO. H. WILLEY,

*Chairman, Board of Water Commissioners,
Newmarket, N. H.:*

DEAR SIR—As a result of my visit on July 2d-3d, personal inspections, conferences with members of your Board, with the Board meeting of July 2, and with your Superintendent, Mr. Harvey, I submit the following report:

Your chief source of supply, Follet's brook, is a small, shallow stream, in a narrow basin 2 to 2½ miles long, with only slope enough to give a gentle flow to the water. This area of possibly one to two square miles abounds in springs which give the saving quality to the water. Unfortunately, since you hold only water rights and have control of only a very little land, you have to submit to all of the bad results from the pasturing of cattle along the brook. The gains which you might make by cleaning out, curbing, covering, and developing the springs, and piping from one to another, would not be worth the cost if land owners maintain the right of pasturage.

Your pumping station, on Piscassic river, near where Follet's brook enters it, is operated partly by steam power (a *single* Knowles pump with no reserve), and partly by water power furnished by a dam in the river, giving about 14 ft. head. This dam, which pounds the river back about a mile to the next bridge, gives you the only storage available in times when the brook fails. Your daily pumpage now exceeds 250,000 gallons to serve about 2,500 consumers, one of which is the B. & M. Railroad Co., which buys from you 100,000 gallons daily for their station at Rockingham Junction. Hence your other consumers are drawing 50 to 60 gallons per person per day.

In spring and in winter after heavy rain, your long, shallow brook basin is flooded over a wide extent, but you have no dam to hold this surplus in storage. By mere inspection the site appears to be unfavorable for a reservoir, because a comparatively long dam would be needed and the stored water would not be deep enough for satisfactory results. This statement is not *positively* made, however, but should be proved by an actual survey. If such storage be feasible, the water would not be satisfactory until after the two or more years needed to dissolve the vegetable matter in the soil.

The conditions along the *pounded river* for about a mile above your dam are said to be more favorable than along the brook. There is less pasturage; the banks are generally protected by trees and thickets. Just now, in the drouth, there is little or nothing coming over the dam above, but considerable flow is maintained by springs in the land which drains into it. Chief among

these is the remarkable *Chapman's spring. I am told that the flow from this is undiminished through the year; by measure and estimate it is believed to be 50,000 to 60,000 gallons daily. Of course this affects quite favorably the water stored in your millpond.

It is reported, further, that the conditions along the Piscassic river above the next dam are not good; that the flow is through low, boggy land; that there are dwellings along the banks, and that the washings of fine clay from the brickyards in Epping make the water murky. However, your millpond is a sedimentation basin a mile or more long, and gives whatever benefit results from that process (sedimentation), always of considerable efficacy as a means of purification. Your so-called "filter-bed" just above the pump-well is not a *filter*, but, as your Superintendent remarked, only a *strainer*. It does not intercept any very fine particles suspended in the water, but only coarser matter. The sides of the basin and channel seemed to be fairly clean and well kept, and the operation as good as you can expect, but no one must allow himself to think that the water is being *filtered*, as we understand that process.

The question of *ground* water is important in your case. You have testified to the success of some of you in putting down driven pipe wells, fifty to one hundred feet and more deep. One of these *flows* enough to fill a $\frac{3}{4}$ inch pipe (*by report*); another requires a lift of only ten feet; Mr. Harvey, your Superintendent, has one; but these are in another basin. The structure of your county seems to be rocky points, low hills and ridges, with hollows filled by drift, such as rocks, earth, gravel and fine sand. The boring made by Mr. Harvey some distance above your strainer-basin, procured a column in the tube rising two feet above ground level, although there was so much fine sand that the drill-point became clogged. Had a casing tube been used more success might have resulted. Expert borings and pumping are needed to show whether there is a reservoir of underground water extensive enough for your needs.

Your daily demand of 212,000 gallons to fill the standpipe and about 30% more for additional use, is a little less than one "acre-foot"—or what would cover an acre one foot deep. (280,000 gallons=40,000 cubic feet, and one acre-foot=43,560 cubic feet.) Now, if there were 5 per cent of voids in the ground, then 20 feet in depth over *one* acre would hold one acre-foot of water; but an *average* depth of 20 feet of such porous drift over any very wide area is hardly to be expected from surface indications. Yet it would be worth while to explore, at the expense of several hundred dollars, on the chance of finding such a subterraneous reservoir. It would be well, however, to seek first the advice of a man quite familiar with your local geology. You might find a large additional supply, but if not, it is better to be sure than to be harrassed by doubts.

Giving due weight to these facts, we are led to the following conclusions and recommendations:

First. You are operating under conditions not only unsatisfactory but sometimes dangerous. The *quality* of the water is always under suspicion, and the possibility of typhoid or other infection is not remote, especially when you have to pump from Piscassis river. But the laws of the state give you a large

*See analysis in tabulated data under Newmarket.

measure of protection when duly enforced by the local board of health within their jurisdiction, and, beyond that, by the State Board of Health. Hence,

First Recommendation: The owners of all dwellings from which the drainage flows into or toward the river should be required to put in sewage tanks or free-flowing cesspools, under advice of the State Board of Health as given in N. H. Sanitary Bulletin for October, 1912, which may be had on application to the Secretary in Concord. The cost of a small tank for a family need not exceed \$15.00 cash, if the owner can do the labor himself. Furthermore, the pond between the dams should be cleaned by removing all dead wood and other material liable to taint the water. Beyond your jurisdiction up the river, the State Board should be called upon to have its inspector make a thorough examination and require abatement of any nuisance or other condition liable to injure your water supply.

As to Follet's brook, our inspection on the 2d instant showed that it is now well looked after, and that its margins are as clean and the appearance of the stream as good as possible under the degrees of control which you possess. If this is to be your chief source of supply for a long time to come, a much wider control of the territory, by ownership or otherwise, should be secured and the springs more completely developed.

Thus far no action calling for large increase of expense has been suggested. Still, considering the question of *quality*, we come naturally to my

Second Recommendation, which is in brief* *mechanical filtration* of the water. This has been so universally successful that no argument is needed in its favor. A small building would suffice for the plant, since, at the allowed rate of 100 million gallons per acre per day, you would need only three or four small units. This of course would add to the running expenses of your works and call for a considerable increase in the rates. Also where waste of water is allowed or persisted in, the cost of such waste would be a serious item and the sinner should be made to pay it. From an exact estimate of cost you must apply to one who is familiar with the construction and operation of such works, to select the site near the pumping station and make survey and design. Such an addition to your works would give you water that would be unobjectionable to the most critical persons, and would conform to sanitary standards. We may say about the cost in general that the rapid filter plant, under very ordinary conditions such as yours, would cost from \$8,000 to \$10,000 per million gallons capacity. As you would provide for half a million gallons daily, the cost would be about \$4,000, or a little more. Extensive tests and experience have shown that the cost of operation per million gallons, including fixed charges, has been from \$10 to \$12, which for you would mean about \$5.00 per day.

But the main point of your present inquiry, as I understand it, is: How can we get more water? This brings us to the question of *quantity*, already referred to.

Second, lack of storage. Is it possible to provide *storage* for some of the superabundant flow in the spring and fall of the year? As before said, conditions for impounding by a dam do not appear to be favorable, but a careful survey might develop a fairly good site. The necessary purchase of land, clearing

*In this connection see report elsewhere on Exeter supply.

of site and building earth dam and gatehouse would probably cost from \$15,000 to \$20,000.

The cost to the Hanover Water Works Co. for a much larger reservoir than you would have was \$22,500, including all land damage and accessory work. To be satisfactory such reservoir should have an average depth of 9 to 10 ft., and depth of 15 ft. behind the dam. The one we built at Enfield ten years ago covers 20 acres, and is not quite so deep as I have just stated. The dam was over 600 feet long. The entire cost somewhat exceeded \$15,000. For you this question could not be decided without exact knowledge of the site, maximum demand, minimum rainfall, study of loss by evaporation, etc. On the whole, we must conclude that the cost of storage on the brook would add more than 20 per cent to your capital and fixed charges and that you cannot decide that question definitely with your present knowledge.

In view of the additional fact that a movement is on foot for building a great aqueduct from Merrymeeting Pond to serve the cities and towns of the east part of the state to Portsmouth, I am led to a.

Third Recommendation, to adopt a waiting policy as to any extensive enlargement of the works. You can use all possible endeavors to protect the purity of your supply by means already suggested; depend upon the storage in Piscassiss river for emergencies, and, if necessary resort to mechanical or "rapid" filtration at cost of a few thousand dollars.

This report is sent to you through the office of the State Board of Health, inviting further suggestion from the Secretary and State Chemist if they have any.

Respectfully submitted,

[Signed]

ROBERT FLETCHER,

Civil Engineer,

President and Engineer of Hanover Water Works Co.

NEWMARKET—DRILLED WELLS.

Conditions in connection with a recently drilled well at Newmarket were observed May 20, 1914.

As noted in a previous report (Rep. S. B. of H., 1909-10, p. 234) the main source of the town supply is Follet's Brook, a small stream flowing much of the way through open level pasture land. Previous to collection at the intake basin this water is subjected to a certain degree of "filtration" by passing through gravel overlaying a number of courses of drain tile resting in the bed of the brook. The water finally also passes through a small sand bed, it being claimed that the surfaces of both this and the gravel are scraped once each year.

Such an arrangement, however, can have no dependable bacterial efficiency; and even as a strainer, while undoubtedly helpful in keeping down the clayey turbidity, yet a certain degree of the latter is generally in evidence in the water as drawn from the service pipes.

About a year and a half ago a system of sewerage was constructed for this village, since which time the average daily water consumption has increased to approximately 200,000 gallons. At times the volume available from the brook is

insufficient and it becomes necessary to resort to direct pumpage from the Piscasset River. The latter was the case during sixty days of last year.

The present well construction is with a view to augmenting the main supply to such extent that river pumping will be unnecessary. The first well was constructed about two rods from the brook at a point a short distance above the collecting basin and possibly a quarter of a mile west from the pumping station. The location is on a site of about ten acres of gently sloping grass land recently purchased by the town.

The drilling was done by the ———— Artesian Well Company, the cost being stated as six dollars per foot. The total depth of this first well is 238 feet, as follows; 34 ft.-6" clay, 9 ft.-6" gravel, 8 ft. boulder and hardpan, final 186 ft. through solid ledge. The casing is ten-inch to the ledge, thence eight-inch. At the time of my visit the well was flowing a stream said to amount to about ten gallons per minute according to measurements. A pumping test was stated as having resulted in demonstrating a yield of 75,000 gallons in twelve hours, a volume which is considered by the driller as susceptible to some increase when an adequate pump shall have been installed. It is the purpose to sink two other wells upon this plot if the chemical character of the water is satisfactory.

The recently collected sample of this water as viewed in the gallon bottle shows a slight milkiness, which latter seems to increase somewhat as a result of standing for a few hours, such being then designated as "marked." This turbidity is due to very finely divided clay or rock particles and will undoubtedly materially subside as the water comes into use. Sedimentation very slight as a result of standing in the sample bottle for three days.

The water shows no appreciable odor, and there is no pronounced taste. However, with careful observation, a very slight alkaline taste, faintly suggestive of lime-water, can be detected. The analysis shows no organic matter, practically no iron, and a degree of hardness to soap no greater than the average for the brook supply. A characteristic feature of this water is its alkalinity. Although the total solids content is not excessive, being no greater than is frequently encountered in the case of deep wells in this section, yet the degree of alkalinity is worthy of remark, being unusual for this vicinity although very commonly met with in much greater degree in well borings outside of New England. Thus the total alkalinity in this case, computed on the basis of normal lime carbonate, is 8.2 parts per 100,000; after deducting the alkalinity due to the usual earthy carbonates normally found in waters everywhere, there is a residual alkalinity due to *alkaline carbonates* of 3.9 parts, calculated as normal carbonate of soda, or, as such alkalinity actually exists in the form of bicarbonate, equivalent to 6.2 parts of sodium bicarbonate ("baking soda")—an amount equivalent on the "grain" basis to 3.6 grains bicarbonate soda to the gallon.

It may be remarked that while such a degree of alkalinity is but slight and—especially considering the dilution with the brook water which will ordinarily occur—is scarcely likely to exert any deleterious effects upon the users, yet it would of course be somewhat better if it did not exist. Such a water will never deposit any "hard scale" in boilers. Although acid waters have a marked corrosive action upon boilers and carbonate of soda is one of the remedies for boiler troubles, yet it is well recognized that water carrying any large quantity of alkali is on this account itself liable to exert corrosive action. In this case, how-

ever, the amount is so small that there is no probability of such trouble, although there may be some tendency manifested to pipe-rusting. An interesting service which such a water might perform is in naturally furnishing the alkaline salt sometimes demanded to be added to waters which are purified by the mechanical system of filtration—a system of water purification, by the way, which has been recommended to this town, and one which would greatly improve at relatively small expense the frequently very turbid water representing the Follet Brook supply.

Respectfully submitted,

CHARLES D. HOWARD,

Chemist.

MAY 26, 1914.

Since the above report was submitted, the superintendent states that a second well has been completed, 403 feet deep and yielding under pumping test 20,000 gallons daily. Construction on a third well is now underway (November, 1914). None of this well water has as yet been turned into the system.

GREENVILLE.

On April 25, 1913, a visit was made to Greenville for the purpose of conferring with members of a special committee appointed to consider the installation of a public water supply.

In the absence of any suitable surface waters, a supply from driven or drilled wells is contemplated. The present population of the village is approximately 1,500, and it is believed that about 100 families would become patrons, the committee having estimated on this basis that a maximum daily supply of 10,000 gallons would be sufficient for the purpose in view. Adequate fire protection from an independent supply pumped from the Souhegan River already exists. The drinking supply, at present derived from a 400-foot well, has proved insufficient, and further, the quality of such has lately deteriorated to such a degree that it is extremely unsatisfactory.

Three locations were examined, but in the absence of any test drillings as yet, it is impossible to venture any positive predictions as to either quality or quantity, as regards the supply available. One location is on the flat near the railroad station. A spring at the further end of this is said to furnish water of excellent quality. A criticism, however, of this site is that it is on very low ground not far from the thickly settled part of the village, and a certain amount of drainage from the latter must penetrate to this point.

A second proposed site is on a hill one half mile above the village, near the location of the Sawtelle Springs, so called. The well and two springs here situated already supply a number of families through an aqueduct. While the adjacent soil is noticeably red in spots, the water is said not to show any evidence of iron. A twenty-foot standpipe erected here would apparently afford service to every house in the village. In my opinion, this is the most promising location. A third place visited is a plot owned by the Columbian Mill Company, located across the river, but it would appear that this affords no advantage over the preceding, and

as regards increased length of main, pumpage, etc., it is disadvantageous.

Examination of samples collected April 28 by Dr. B. D. Pease from the Sawtelle spring and the spring on the flat near the railroad station, afforded the following results:

	Sawtelle spring	Flats spring
Odor	none	faint earthy
Color	0.03	0.03
Turbidity (on standing)	none	none
Sediment	sl. coarse flocc.	sl. fine fibrous
Free ammonia	0.0006	0.0006
Albuminoid ammonia	0.0016	0.0010
Nitrates	0.006	0.020
Nitrites	0.0000	0.0000
Chlorine	0.07	0.35
Total solids	3.5	7.3
Hardness	0.7	1.2
Iron	0.005	0.000
Colon bacilli	none	none

The above indicates good water in both cases, although the materially higher chlorine and nitrate content in the case of the Flats spring is what might be expected, and serves to demonstrate the greater purity of the other source, so far as possible sewage contamination is concerned. On the other hand, the Sawtelle spring does show a trace of iron, not evident in the other. While the above amount is insufficient to appreciably injure the water, it is possible that the water of a large fairly deep well drilled upon this location might be found to carry a larger quantity, especially in time following extensive draft upon the ground water.

It is evident therefore that both sources, while in a general way representing good water, are neither one of them entirely beyond criticism, although the objection in each case may seem insignificant. If actual use demonstrates that the Sawtelle spring supply is entirely satisfactory for domestic use, affording no trouble, for example, in connection with clothes-washing, cooking, etc., and if it should seem from subsequent examination of a test-well water that the proportion of iron will not be materially greater than that above indicated, then this will doubtless prove the more satisfactory location of the two. While the Flats spring water is at present slightly more attractive in appearance, yet it should be borne in mind that an equally good appearance would not necessarily be true of an extensively drawn-upon well supply in this location, especially at all seasons.

During April, 1913, the chemist of the Board went to Greenville and examined several proposed sources of supply—inclusive of springs and proposed locations for driven wells. As a result, the use of one of these springs was advised against; the other was found to afford an inadequate quantity, and test wells made at this location (Sawtelle Springs) indicated that such quantity could not be readily increased.

Subsequently, a number of test wells have been sunken in various localities and the water encountered submitted to analysis. Here, too, however, no success was attained; either the quantity was found to be deficient, or the quality was unsatisfactory. Concerning the results of a second visit, made during December, Mr. Howard reports as follows:

During June last, attention was called to a spring situated on the west bank of the Souhegan River, a few rods above the railroad bridge. While this spring has for years been a popular source of drinking water for the neighborhood, it had not been supposed that the flow was sufficient to warrant consideration as a source of public or town supply. Following are analyses of samples collected (a) on June 22, 1913, before any development had been undertaken, and (b) after excavation to a depth of about twenty feet and material increase of the flow:

	Sample (a) No. 11180 June 22, 1913.	Sample (b) No. 11788 Nov. 25, 1913.
Odor	none	ft. earthy
Turbidity	slight	sl. opalescent
Sediment	mod. flocc. earthy	sl. to mod. earthy
Color .....	.05	.03
Free ammonia .....	.0006	.0008
Albuminoid ammonia .....	.0010	.0018
Nitrates .....	.005	.005
Nitrites .....	.0000	.0000
Chlorine .....	.08	.10
Hardness .....	.6	1.2
Iron .....	.007	.....
B. coli	negative	negative

With the exception of a little earthy sediment, the above analysis indicates good water, free from excess of iron and any form of contamination. While the soil excavated is sand, the latter contains a few streaks of clay, and for this reason the water shows a slight bluish opalescence at the spring, and deposits a slight earthy sediment in the sample bottle. It is believed, however, that with settled conditions there will be no appreciable amount of turbidity and that the quality will prove very satisfactory.

The original flow of this spring (estimated, it should be noted, during a very dry season) was found to be 25 gallons per minute. On excavation to a depth of about 20 feet, the flow was increased to a volume of 57 gallon—this, however, being later in the year and following a period of rains. It is believed that the amount available will be ample for domestic use. The matter of fire protection is otherwise provided for.

This spring is situated one half mile from the village at the foot of a high wooded bank some 50' from the river, and rises to a height of 5' or 6' above the latter.

The only possible opportunity for any contamination is from the river itself. The latter receives some of the sewage of Greenville, also a certain amount of mill waste. While the spring normally consists in no part of river water and the chances of contamination from this source under ordinary circumstances are believed to be very remote, yet it is conceivable that were the reservoir pumped to a level much lower than the river, a certain amount of water from the latter might seep in through the intervening soil stratum, although even in such an event the water would have necessarily undergone more or less filtration.

The plan is, therefore, to excavate a reservoir on the site of the spring of about 50,000 gallons, putting in a tight embankment of masonry on the river side of sufficient height and depth effectually to exclude any possibility of entrance of river water.

The supply will be pumped at intervals to a standpipe, to be located on a hill in the center of the village, supplying the mains en route.

The spring project referred to above having been ultimately rejected, consideration was next given to two ponds as possible sources of supply. It is understood that the Pratt Pond source has finally been adopted. In presenting his report upon this pond, Mr. Howard summarizes the situation as follows:

The Water Supply Committee (Mr. F. W. Ely, Chairman), appointed by the town early in 1913 for the purpose of looking up a suitable supply, has already investigated a number of sources, those hitherto consisting of wells and springs and driven well projects. Such have all been abandoned, for one reason and another. Some were inadequate, others showed some evidences of sewage contamination, while others carried iron in amount sufficient to render them non-acceptable. The most recent project, a spring situated on the bank of the Souhegan River a short distance above the railroad bridge, has been rejected because of probable insufficiency, of the expense of pumping and because of lack of adaptability to the existent system of piping. On this date I observed that the opalescence due to suspended clay, and noted last summer, continues. At that time it was thought that in view of the recent excavation, this might be a temporary feature which would eventually clear up. As a permanent characteristic, this feature would tend to impair somewhat the otherwise excellent quality of this source.

Ashley Pond. This pond, located a short distance outside of New Ipswich Village, supplies power to Ashley's mill. Areas not over two acres; bottom, muddy; watershed, level, mainly wooded but has one farm, with buildings. This pond has an elevation above Greenville of something over 200 feet and is distant therefrom three miles.

Neither the pond itself nor the analysis of its water are such as to recommend it as a source of supply for Greenville. The degree of color in the sample examined (0.35) is higher than is desirable. The chlorine content also, while by no means excessive, is still somewhat higher than

that of Pratt Pond, indicating a greater degree of natural purity in the latter case. The proportion of nitrogenous matter in Ashley Pond is not particularly high, as found in the sample examined. This pond is too small to serve as an adequate supply, and the quality of the water is not what it should be for such a purpose.

Pratt Pond. This pond is situated near Smithville, at a distance of about six and one half miles from Greenville; altitude thereabove said to be 400 feet. The watershed, which is a comparatively large one, is altogether wooded and contains neither habitations, farming land nor pasturage. Area of pond estimated at about thirty acres; spring fed; small stream discharges through dam at outlet, evidently once the site of a mill, long since abandoned. Much of the watershed is quite steep, consisting in part as it does of New Ipswich Mountain (southern slope) and a chain of hills to the southwest.

The immediate shores are rather flat and extensively brush-grown, and there are two or three clumps of "brush" growing off-shore. However, much of the shore is rocky or ledgy, with sandy or gravelly edge. The bottom is apparently also mainly sandy, although overlaid in places by a mucky deposit of varying depths and representing deposited vegetable debris. From a study of the situation it would appear that to clean the brush and other growths from the shores would be comparatively inexpensive matter, the doing of which would greatly improve the appearance and render the pond a clean and attractive looking source of supply. It is stated that this pond and much of the watershed can be bought at a reasonable figure, thus permitting absolute sanitary control by the town.

The analysis of a sample of Pratt Pond recently submitted shows that the quality compares very favorably with that of our best pond sources of water supply. The degree of color in this particular sample was quite low—less than one third that of the Ashley Pond sample. As a pond supply, in my opinion, the quality will prove satisfactory, that is if proper attention is given to clearing and maintenance of the shores. It should be pointed out, however, that it is unwise to base a verdict as to quality upon a single sample. It is therefore recommended that during July or August next a series of three or four samples be collected from different parts of the pond, and that these collections be followed later on by samples taken, say, in October, December or January, and in April. In this way we can note the seasonal variation and thus secure a much better idea as to the general character of the water. It is understood that no construction work is likely before next spring.

LANCASTER.

Under date of February 18, 1914, Dr. Frank Spooner, Secretary, Board of Health, Lancaster, informed the State Board of Health that the water company of that town had notified the public that they were about to pump water from Israel River into the reservoir, on account of shortage of the regular supply, and he asked if the board of health should allow it to be done, requesting a reply by telegraph.

The river referred to being a badly polluted stream, the State Board of Health replied that such action should not be permitted.

On the same date, the following letter was received, together with a copy of the notice of the water commissioners and the fire engineers to the effect that they should begin pumping water from Israel River on the evening of February 19, and advising consumers to boil all the water that was to be used for drinking purposes as a safeguard against any bad effects that might otherwise follow:

February 18, 1914.

Dr. Irving A. Watson,

State Board of Health, Concord, N. H.

DEAR DOCTOR WATSON:

I enclose herewith circular issued today, February 18, by the water commissioners and fire engineers of the town of Lancaster, N. H., which is self-explanatory as far as it goes. There are certain facts not stated on the circular which are important. The intake pipe for pumping water from the river to the reservoir is located in what is known as the Frank Smith & Co. mill pond, situated in the heart of the village. This pond lies between the parallel streets known as Middle and Mechanic Streets, both thickly populated streets. The mill pond in the course of perhaps a quarter of a mile above the intake pipe, receives the sewage from the abutting houses of both these streets. The reservoir is situated a matter of a mile or less from the village. This reservoir is the only public water supply of the town.

I wish to enquire whether or not this proceeding, as set forth in the enclosed circular, is a violation of the public statutes with reference to the pollution of public water supplies, regardless of whether such action is sanctioned or ordered by town officials in the light of what they consider an emergency with reference to fire protection.

Thanking you for any information on this subject, I am,

Respectfully yours,

HOMER B. SMITH.

Enclosure.

The following is a copy of the circular mentioned in the foregoing letter:

To the Users of Water from the Lancaster Fire Precinct Water System:

Owing to the extravagant use or the wasting of the water by the patrons of the system, largely, as we suppose, to prevent the freezing of their water pipes, which should have been properly protected from frost without making it necessary to waste the water, and as the reservoir is nearly empty and the property in our village is practically without fire protection, we, the Lancaster Fire Precinct Commissioners and Fire Engineers, have decided that it is necessary, under the circumstances, to pump water from the river into the main pipes of the system, and to continue doing so until such a time as the reservoir is at a sufficient fullness to give us a protection against fire.

After 8 P. M., February 19, 1914, and to continue until you are notified to the contrary, by advice of one of our prominent physicians, you are advised to boil all of the water used for drinking purposes, as a safeguard from any bad effects to the users of the water.

The above will be in effect unless the reservoir shows a marked increase during the day and night of the date above given.

W. E. BULLARD,
J. B. McINTIRE,
C. A. CLEVELAND,
Commissioners.

ALLEN MOYLE,
J. P. WARK,
F. J. WILLIAMS,
Fire Engineers.

Immediately following the receipt of this information by the State Board, its chemist, Mr. C. D. Howard, was directed to go to Lancaster to investigate conditions there. This he did, and a few days later a copy of his report was transmitted to the board of health of Lancaster, as follows:

THE STATE OF NEW HAMPSHIRE,
OFFICE OF THE STATE BOARD OF HEALTH,
CONCORD, N. H., February 24, 1914.

*Frank Spooner, M. D.,
Secretary Board of Health,
Lancaster, N. H.*

DEAR DOCTOR—Inclosed is a copy of the report of our chemist, Mr. Charles D. Howard, on his inspection of the water situation in Lancaster, on February 19, 1914.

This report is so comprehensive that little or no comment is necessary. The State Board of Health endorses to the letter the recommendations made by Mr. Howard. This board will insist that the following recommendations be carried out by your board:

1. That no water shall be pumped from the mill pond into the reservoir or into the mains connected therewith, unless:

(a) The water in said reservoir shall be exhausted to within two feet or less in depth, or

(b) In case of a conflagration which might render such pumping necessary to protect the town against serious loss by fire.

2. In case it should become necessary to pump water from the mill pond into the reservoir in either of the above events, the process of chlorination must be started simultaneously with the pumping and be maintained so long as any water is pumped from the said millpond into the reservoir.

A bacteriological examination of a sample of water taken from the mill pond by Mr. Howard and brought to the State Laboratory of Hygiene at the time of his recent visit revealed extensive infection with the colon bacillus, and this at a season of the year when much household drainage which would otherwise reach the pond is presumably frozen, and yet the water is seriously polluted. There can be no question, whatever, upon this point.

The number of buildings that surround the pond, with the sewage that is going into the water, is sufficient in itself, if there were no other known facts, to condemn the water *in toto* for domestic purposes.

The State Board of Health had occasion a few years ago most emphatically to warn the town of Littleton against pumping water from Ammonoosuc River into its mains, but the warning was not heeded, and as a result, in the winter of 1902-3 there occurred one hundred and thirty-nine cases of typhoid fever, with eleven deaths, from using water against which the public had been warned.

In 1903, and previously, the authorities and the public at Woodsville, had been warned against pumping water for domestic purposes from the Ammonoosuc River, but the advice was disregarded, and forty-eight cases of typhoid fever, with five fatal cases, resulted.

We are certain that the people of Lancaster do not want and cannot afford an experience of this kind. The Woodsville epidemic occurred in the face of the fact that the authorities and the public had been warned that Ammonoosuc River water was unsuitable for domestic purposes, and that if used it must be boiled. As a matter of fact, such a warning is heeded by only a small proportion of water takers in any case.

We regard it as the imperative duty of your board to take these questions into consideration, and to enforce such regulations as may be necessary to protect the people of Lancaster against impure water.

Very truly yours,

IRVING A. WATSON,

Secretary.

The chemist's report follows:

Dr. Irving A. Watson,

Secretary State Board of Health:

DEAR SIR—On February 19, 1914, I went to Lancaster to investigate conditions in connection with a shortage in the water supply and the alleged necessity of augmenting such by pumping from the river.

Upon the arrival of your representative, a joint meeting of the boards of health and water commissioners was held, during which the situation was discussed. It appeared that on account of the nearly empty condition of the reservoirs, the board of water commissioners had already taken steps preliminary to immediate pumpage therein from the river, and that consumers had been notified of this intended action by the circulation of "fliers" suggesting the boiling of the water. Learning of this, the board of health served a notice of protest upon the water commission, which latter board consented to defer action for a few hours longer. It appeared that this board considered that an extremely hazardous situation existed, and that it would be amply justified, in the interests of property protection, in taking this step, regardless of any other considerations that might be urged. The board of health on the other hand, while acknowledging the danger to which the village was exposed, nevertheless expressed itself as being distinctly opposed to such emergency pumping except in the actual event of an outbreak of fire.

I subsequently made an examination of conditions at the reservoir, also at the river above the proposed point of intake. The supply consists of a spring-fed mountain brook having its source in the town of Kilkenny, from which it is piped to the reservoir, a distance of about six miles. The reservoir is situated one mile from the village, with an elevation of one hundred and eighty feet above the main street, giving a normal pressure of about eighty-five pounds per square inch. The capacity of the reservoir, which is of irregular shape, is variously estimated at from two to four million gallons, no definite information on this point being available. The depth to the point of overflow is twelve feet. The supply is unmetered and no estimate as to the consumption was available. It does, however, serve a population of some two thousand people, with about six hundred services. In addition to some water used for manufacturing purposes, about one seventh of the revenue accruing to the precinct from the sale of water is on account of that supplied to the railroads for boiler use. It may be added that the quality of this supply is uniformly of a very high order.

Examination of the reservoir on February 20, showed a level of but two feet of water. This was considered as favorable, as contrary to the condition on the previous day, no further drop was indicated, notwithstanding that the night had been severely cold, and also that a rather serious leak in one of the street mains had persisted for some two or three hours the previous evening. It seemed to be agreed that the cause of the present shortage was a combination of a deteriorated and leaky condition of the plumbing, together with a habit, become widespread as a result of the unusually severe weather, of leaving the faucets open at night for the purpose of preventing freezing. As opposed to this explanation is the admission that no condition at all closely approaching the present one has ever before occurred during the winter season.

As serving to demonstrate the value and greater economy in a metered system and the carelessness and indifference to waste and the need of plumbing repairs in an unmetered one, it was said to have been admitted

by one householder that his closet flush tank had been running continuously for three years, while as a result of the present emergency, the local plumbing establishment had booked orders for several days' work repairing faucets. Evidence was also said to have been found that in the case of one house, nine spigots had been left open during the previous night.

The emergency, or fire intake, is at the mill pond dam on a rather small stream locally known as Israel's River, said to have its origin twenty miles back in the mountains. The mill pond is of some three acres area, with an average depth of fifteen feet. Only a brief inspection was made of the sanitary condition of the shores, but this was ample to demonstrate, especially in connection with the admission of the water commissioners that a number of house sewers discharge directly into the pond, that this source as a water supply is necessarily absolutely unsafe and unfit, this notwithstanding that such water may not, and very probably does not, present any very bad physical characteristics. Both shores of this pond are closely lined by houses, very many of which are unconnected with and could not be readily connected with the public sewer. In addition, a number of manure piles, stables and chicken houses were noted close to the water's edge.*

It may be pointed out that while the physical condition of this river water may be somewhat better at this time than it is during the summer season, nevertheless there is, on the whole, actually more danger in the use of this water at this time than there would be in summer, due in part to the absence of those favorable opportunities then existent for the destruction of the sewage forms of bacteria; in part to the fact that in the event of a sudden thaw much filth will necessarily be carried directly and unimpeded into the pond.

In a statement of the situation which I prepared for submission at a meeting of the precinct to be held the evening of February 20, the salient features were pointed out, and occasion was taken to state that assuming it were possible to secure sufficient fire pressure to care for a fire, operating the pump with the water power available, the pumping of such river water into the reservoir with a view of securing storage in anticipation of such an emergency, should be forbidden. It is stated, however, that while under favorable conditions it is possible to develop with this pump a pressure equal to the normal reservoir pressure, yet at times, due to the fluctuation in the volume of water going over the dam, there is insufficient water power to properly operate the pump. It is my opinion, however, considering all the facts, that there would be justification for restraining the board of water commissioners from such pumping into the reservoir, unless the present level should decline materially, i. e., unless such reservoir should become practically empty. Actually, it would appear that no further diminution is likely, and it seems to be the present sentiment of the board that under the present circumstances, it would be disposed to refrain from river pumping.

*A sample of water collected from beneath the ice in the wheel pit of the grist-mill gave positive results by the presumptive test for colon bacilli on 10cc., 1cc. and 0.1cc quantities.

However, in the event either of the reservoir becoming empty, or the outbreak of a fire, the necessity of applying a sterilization to the river water was emphasized, and full details for effecting this were left with the board of health. It was promised by the constructor that the barrels, together with the necessary piping, and a water-closet flush tank to serve as a constant level tank, should be assembled in place, ready for use, during that afternoon (February 20). Based upon the estimated capacity of the pump operating under the conditions obtaining of ten thousand gallons per hour, a treatment was devised which would involve a dosage of approximately 0.5 parts chlorine per million, such, if conscientiously applied, being ample to render this water safe for drinking. I have, however, recommended that for the present at least, as a further check, the water be boiled by the consumer, following any emergency pumping.

It has been proposed that this emergency intake be moved to a point above what is known as the upper dam. It seems to be agreed that the stream at this point is not subject to any great amount of domestic sewage pollution. Unfortunately, there was neither time nor favorable conditions for any adequate inspection to verify this view. In case the change is made, it is believed the board would be justified in regarding such as coming under the law passed by the legislature of 1913 and that an inspection and the approval of the board should be secured.*

It may be added that in view of the fact that practically every public water supply is provided with an emergency intake, such frequently if not usually being in a polluted source, and that also in view of the fact that many water superintendents or water boards are inclined to place property protection above health protection and to belittle the likelihood of any serious consequences arising as a result of emergency pumping, there should be more extensive oversight of such intakes by the State Board of Health. It would seem that such board ought not only to exert a specific authority in regulation of the use of water from sources of this character, but also that it should, in the event that a choice of location is available, have something to say as to where such shall be placed, also as to the sanitary character of the surroundings.

Respectfully submitted,

CHARLES D. HOWARD,
Chemist.

February 21, 1914.

The matter of relocating the emergency intake in Israel River in connection with the Lancaster water supply having arisen, the chemist of the board went to Lancaster June 9, 1914, for the purpose of examining conditions on this river. His report, as well as the letter of transmittal and the order of the board issued in connection with the matter, follow:

*See report following.

STATE BOARD OF HEALTH.

THE STATE OF NEW HAMPSHIRE,
OFFICE OF THE STATE BOARD OF HEALTH,
CONCORD, N. H., June 11, 1914.

Mr. W. E. Bullard,
Chairman Board of Water Commissioners,
Lancaster, N. H.:

DEAR SIR—Inclosed is a copy of the report of our chemist, Mr. Charles D. Howard, on his recent examination of the situation with respect to the emergency water supply from Israel's River.

I think a careful reading of this report will convince you that the position taken by the State Board of Health in the inclosed order is certainly justifiable.

There can be no question that the water of Israel's River, unless chemically treated, is dangerous for domestic purposes.

The carrying out of the inclosed order will not entail any unreasonable expense, and it is in accordance with the proposition which I think was assented to by your company in February last, when some question arose regarding your water supply.

I would emphasize the statement in Mr. Howard's report, that if the present supply were conserved there probably would be no need whatever of pumping water from the river.

Very truly yours,
IRVING A. WATSON,
Secretary.

Inclosures.

THE STATE OF NEW HAMPSHIRE,
OFFICE OF THE STATE BOARD OF HEALTH,
CONCORD, N. H., June 11, 1914.

Board of Water Commissioners,
Lancaster, N. H.:

GENTLEMEN—A careful investigation of Israel's River and its tributaries reveals the fact that this stream receives at all times more or less sewage, which renders it a dangerous source of water supply for domestic purposes. It is, therefore,

ORDERED, That no water from Israel's River shall be pumped into the town supply pipes except in case of great emergency (such as a conflagration), and that all water so pumped shall be chlorinated in accordance with specifications approved by the State Board of Health, and that all households and other establishments using the said water shall be immediately notified of such action.

Per order,

IRVING A. WATSON,
Secretary.

MR. HOWARD'S REPORT.

CONCORD, N. H., June 9, 1914.

*Dr. Irving A. Watson,**Secretary State Board of Health:*

DEAR SIR—The matter of re-locating the emergency intake in Israel's River in connection with the Lancaster water supply having arisen, I went to Lancaster on June 9 for the purpose of studying the situation. In this examination of conditions on the above-named river, I was accompanied by Mr. W. E. Bullard of the board of water commissioners.

This emergency intake, at present located at the gristmill dam, is operated by a pump designed to force river water at considerable pressure into the mains in the event of an extensive fire.

Because of sanitary conditions on the pond above (pointed out in an earlier report), water drawn at this point cannot be considered as fit in any sense for drinking purposes, or as a suitable adjunct to the main supply in any other respect than for the extinguishing of fires.

However, it is represented that at times the level of the water in the reservoir drops materially below the overflow point (12 feet). On a few occasions the level has been greatly reduced, and it is therefore the desire of the commissioners, with a view to maintaining at all times satisfactory fire protection, to be able to pump from some suitable source, at such times as may seem expedient, sufficient water to maintain the normal level.

Whereas in the past such pumping has been practised in very rare instances only, I should infer that the present intent in re-locating the intake involves the expectation that water of sufficiently good quality would be secured as to permit of pumping into the reservoir at any time when it might seem expedient to do so, and without, necessarily, notifying the consumers of such action at the time.

The quality of the present Lancaster supply is hardly excelled by any other public supply in the state. This high quality is distinctly a valuable asset of the town—something in which its citizens may justly take pride. It is manifest that the introduction of any inferior auxiliary source would be unfortunate; and it is, therefore, not at all likely that the people of Lancaster would care to consider the use, even during very short or infrequent intervals, of a supplementary system of distinctly polluted origin.

This emergency intake re-location included two propositions: 1st. To establish the pump at the Jones & Linscott Electric plant, some half mile or more above the gristmill, with the intake at the canal dam furnishing power for such plant; 2d. Pumping from the same point, but extending the suction pipe up the canal to the old paper mill dam on the main river. The later course would avoid some contamination from the Maine Central Railroad roundhouses, situated just above the Jones & Linscott plant.

An examination of the sanitary conditions above the latter plant showed the following facts: Just opposite the railroad roundhouse, two sewers discharge into the canal. The first includes the discharge of a

flush tank, also the washings of locomotive boilers, inclusive of boiler chemicals, etc. The second, while said to be a small natural brook, is nevertheless charged with street washings, etc.

It is true that by extending the suction pipe some seven or eight hundred feet up to the river dam, the roundhouse contamination would be avoided.

One fourth mile above this dam is a second dam, supplying power for the Lancaster & Jefferson Electric Company. This plant employs two men; no closet; employes state that they "go to the river," or else use a closet discharging into the river and attached to an abandoned mill immediately above.

At this plant it was said that there is a practice of dumping garbage of all descriptions into the river. Between the two dams there are but two houses on the immediate watershed, neither of which sewers directly into the river.

A half mile above the upper electric plant is the Quimby brickyard, employing a half dozen men; one dwelling attached, with earth closet; wash from brick machines discharges on the grass a number of rods from the river.

Otter Brook discharges into Israel's River about one and one half miles above the gristmill. Just above this junction there are located on or very near the brook some eight or ten sets of farm buildings, inclusive of dwellings. One half mile farther up this brook is a small village known as Grange, a collection of some fifteen dwellings, with two stores, saw-mill, blacksmith shop, etc. The sewer entering the brook at this point includes the discharge, it was represented, of four flush closets, besides the street washings entering at the grating, and there are at least two other flush closets delivering into the brook, not to mention seepage from various sink drains, etc., eventually reaching this stream.

From this point we proceeded to the village of Jefferson Hill, noting from an elevation on the way the location of the regular supply intake in a mountain brook some five and one half miles from the reservoir. It could be observed that this section is practically all wooded, with no apparent possibility of sewage contamination.

At Jefferson Highlands we were informed by responsible parties that there are two sewers (a) that of the Waumbec Hotel and cottages (at this date still closed), and (b) a sewer serving a number of private residences and connecting with that from the hotel property. The combined sewerage, it was stated, enters a brook at a point one fourth mile from the river, thence reaching the latter stream. From this point, the flow to Lancaster is estimated at about eight miles, much of the way, it was noted, being through open farm land with the usual farm buildings.

It will be observed, therefore, that in addition to the small amount of pollution entering the river just above the Jones & Linscott plant, there is a material amount discharging therein from Grange. More serious still and affording a source of very great danger during the summer season, is the sewage discharged from the Waumbec Hotel at Jefferson—a place accommodating five hundred persons.

It is futile to suppose that the subsequent river flow of eight miles is sufficient—or anything like sufficient—to purify the river of this extensive contamination and render its water safe for drinking.

It should be obvious, therefore, that any plan involving direct pumping from the river, unannounced, and with the view merely to maintain a satisfactory stage of water in the reservoir, ought not to be seriously considered except in time of dire emergency, and even then only when accompanied by the use of the chemical treatment already prescribed, and followed also by an immediate warning to the consumers.

The only advantage, therefore, in changing the present location of this emergency intake would be that, in the event of a serious fire demanding river pumping, an intake at the upper point mentioned would afford water of a somewhat cleaner character, thus involving somewhat less serious fouling of the mains.

It would appear, however, that there is yet much that can be done, and at relatively small expense, in the way of augmenting the present high quality brook supply.

There seems ground for a belief that by going a few hundred feet farther up the brook, the present "head" would thereby be materially increased, affording a corresponding increase in the quantity discharged at the reservoir in a given time. It is stated that extensive repairs at the brook dam will be necessary at a very early date, so that the present is a favorable time for the re-location of such dam.

A second means of increment is through enlarging the reservoir storage. Thus it was noted that water was wasting at the overflow at a rate of five to ten gallons a minute. At night the wastage would be greater, as it also doubtless was during the past very rainy season. There is no reason, whatever, why this wastage should be permitted to occur, especially in the face of any question as to the securing of more water. Storage would in no wise injure the quality, and it is estimated that by simply joining on an upturned bend to the inlet of the overflow pipe, with practically no other expense whatever, beyond possibly a little grubbing off of vegetable matter, an increased depth of at least one and one half feet could thereby be secured. And by the expenditure of a comparatively small sum for raising and strengthening the reservoir embankment slightly, it would appear that the available maximum stage could be raised at least three feet above the present. This would mean really a greater increase of storage than might at first appear, in view of the fact that the shores shelve off very gradually, the area of the lower three or four feet of depth being very much less than that of the full reservoir area.

By a combination, therefore, of increased storage and increased delivery capacity of the supply main from the brook, it would appear that a materially increased supply of the pure brook water might thereby be attained, thus rendering it unnecessary to pump dangerous river water into the system, except in the event of an extraordinary emergency.

Respectfully submitted,

[Signed]

CHARLES D. HOWARD,

Chemist.

June 10, 1914.

WOODSVILLE WATER SUPPLY.

For a long time the character of the Woodsville water supply, drawn direct from the Ammonoosuc River without any subsequent purification, has been a serious menace to the safety of the citizens of this village. Notwithstanding that warnings have been from time to time issued against using this water for drinking purposes without boiling, and although the more intelligent of the consumers understood its dangerous nature, yet there is evidence showing that many did not scruple to drink the water with more or less regularity.

During 1913, the situation was studied by the chemist of the board, who submitted a report as follows:

Dr. Irving A. Watson,

Secretary State Board of Health:

DEAR SIR—In company with Health Officer Johnson, on June 30, 1913, examination was made of the various sources of water and ice supply of the village of Woodsville.

At the present time there are three sources of public water supply, viz., the Ammonoosuc River, Wilmot Springs, and the James Gordon Spring. The first two are operated by the Woodsville Aqueduct Company, which is a subsidiary company of the Boston & Maine Railroad. A further spring supply, that of Jas. R. Lowe, at present furnishes water to but two tenements only. Until this year quite a good deal of spring water has been hauled into the village from the Mitchell spring, located a short distance over the boundary line in the adjoining town of Bath, but this is now discontinued. The location of this spring was noted as being well above any possible contaminative agencies. In addition to the above, a spring known as the Dearborn spring, located one half mile south of the village, is resorted to somewhat extensively by the neighborhood residents. While the surroundings here are favorable and the water is doubtless of good quality, the practice which prevails of promiscuously dipping receptacles into the basin is objectionable.

The Gordon spring, which supplies about thirty-three families, is located in meadow land at the northern edge of the village. This spring was found to need cleaning. It should be extended with cemented brick or stone above the surface for a sufficient distance to prevent any influx of surface water during periods when the adjacent land is overflowed. The surroundings are satisfactory. Galvanized iron pipe is used throughout. The quality of this supply is good.

Wilmot Springs. This is the original source of supply of the Woodsville Aqueduct Company, and consists of a large spring or pool, with two "feeders," situated in wooded pasture land one and one half miles southeast of the village, the water being conveyed thereto through a lead main.

At present this property is in a condition of extreme dilapidation. The brick wall enclosing the pool collapsed some time ago, and forms a pile of ruins standing in the water, while the shed covering the spring is tottering.

The wooden covering over the feeding springs is rotten and falling in, while, as serving to demonstrate the lack of any recent oversight, reference may be made to the fact that a badly decomposed rat was observed lodged in the extremity of the intake pipe. Evidently nothing whatever has been done for many years in the way of upkeep, and from all appearances the supply is an abandoned one.

Standpipes. And yet the people of Woodsville, the more intelligent of whom very properly refuse to drink the river water, daily flock with pails and pitchers to the "standpipes" for what they regard as "pure spring water." These standpipes, five in number and receiving the supply from Wilmot Springs above mentioned, are distributed throughout the village and consist of ordinary sized service pipes extending upright from the sidewalk and terminated by spigots. One or two of these are housed over and are supposed to furnish water throughout the winter, though as might be anticipated, there is complaint that these not infrequently are out of commission on account of freezing. Except therefore for the latter and a few private wells, the raw river water is the only source of supply available at this season to the majority of the consumers.

It was found that there is considerable suspicion on the part of some of the consumers that the so-called "standpipe" water is not all spring water, but that there is a connection between this and the main river supply. Direct interrogation of the company's superintendent, Mr. E. J. Mann, as to this point, brought forth a vigorous denial that any river water whatever mingles with the spring water at any point or at any time.

Inquiry as to the manner in which the company secures remuneration for this standpipe water revealed the fact that none is received. In other words, the company furnishes this Wilmot Spring water free, thereby virtually admitting that its main supply is unfit or unsafe for drinking purposes. The standpipe system, it would seem, is therefore merely a pacifier, offered consumers with the hope that thereby the company may escape being compelled to take such measures as may be necessary to render its regular supply suitable for drinking; possibly a more just view would be that the above is a measure of procrastination designed to tide over the time until it shall appear financially expedient to make necessary improvements already contemplated. While the standpipe expedient should not be allowed much longer to operate to deprive the people of Woodsville of a safe water supply, yet so long as this system is kept in use there should be proper maintenance of the source of supply. That this water is at times dangerously contaminated by lead is bad enough, though it would probably not be expedient, under the circumstances, to go to the expense necessary to remedy this feature.

Ammonoosuc River Supply. It is common knowledge that this, the present source of supply of the Woodsville Aqueduct Company, is polluted to a dangerous degree through the discharge of both domestic and industrial sewage by the various towns situated on the river immediately above. The point of intake is at a dam which furnishes power for water pumping and current generating and which is located a few rods above the confluence with the Connecticut River. The water is conveyed to the intake pipe through a flume, and is said to pass during its course through some eight inches of sand.

Access for inspection of this "filter" was not available. This sand bed is said to be cleaned three or four times a year, its object obviously being merely the removal of the coarser suspended particles.

The daily pumpage is estimated as being 450,000 gallons, about one half of which is consumed by the railroad. No reservoir is used, the water being pumped directly into the mains, where by means of an ingenious regulating device operating upon the water wheel, uniform pressure is constantly maintained.

A strong odor of sewage, noticeable in the neighborhood of the pumping plant, was traceable to the discharge into the river of two sewer pipes at a point some fifty feet below the intake pipe. It seems apparent, however, that there is no practical possibility of contamination of the pumped water through any back flowage, although the nearness of this sewer discharge to the intake is certainly objectionable.

Typhoid Fever in Woodsville. I am informed by the health officer that during 1912 fourteen cases of typhoid fever occurred in the village of Woodsville, while since February first of the present year there have been eight cases. The remark made in this connection by a local citizen to the effect that there is "probably no more fever here than anywhere else, considering population" reveals a not unnatural ignorance as regards typhoid statistics. While the population of Woodsville precinct was not learned, it is of course but a fraction of that for the town of Haverhill, which is approximately 3,500, according to the last census, so that, based upon the above figures, the typhoid case rate for Woodsville would be not less than seven hundred to eight hundred per 100,000. Compare this with Concord, for example,—a city which ranks exceptionally high among other cities of the United States for its low typhoid rate. In Concord the total number of reported cases, on the 100,000 population basis, was:

During 1908	28 cases
1909	130 "
1910	74 "
1911	47 "
1912	70 "
Average, 5 years.....	70 "

That is, based upon the number of cases during 1912 and those to date for the current year—admittedly a limited period for statistical purposes—it appears that Woodsville has in the neighborhood of ten times as many cases of typhoid fever as does Concord, calculated to the same basis of population. It will hardly be questioned that this data, notwithstanding its meagerness in the case of Woodsville, is at least sufficient to demonstrate the existence of some serious hygienic defect in connection with the general life of the latter community. In searching for an explanation of the above wide variation, none is to be found in any peculiarities as regards general local conditions or character of population. While Woodsville is a railroad center, and people are "coming and going" to a greater extent perhaps than may be the case in the average community, yet this is no less true of Concord. The only essential difference between the two places, bearing upon the point under discussion,

is that, whereas Concord's water supply is pure, that of Woodsville is definitely known to be polluted in such manner that its use for drinking purposes not alone might, but necessarily *must*, according to all our knowledge on the subject, be responsible for a certain amount of typhoid fever.

Admittedly, it would be unfair to give the water supply full credit for all the typhoid cases. As in every other community, a certain proportion of these cases are undoubtedly contracted outside of the town or from other causes than a polluted water supply. Also, a diagnosis unconfirmed by a Widal examination is by no means infallible, so that not all cases reported as typhoid fever are actually such. On the other hand, as is well known to you, many physicians are extremely negligent about the reporting of cases to the local health officer, and this is all the more apt to be true where a given disease is more than commonly prevalent, or where public knowledge of its existence is liable to cause reflection to fall upon some interest. In fact, in this instance, the health officer informs me that in connection with certain physicians, he has frequently had difficulty in securing reports, and would never learn of any of their cases at all were it not that he chanced to hear of them from other sources. Under such a system, there is no estimating how many cases occur that fail of official record.

Another feature of some interest in connection with typhoid at Woodsville is that examination of such records as have been made during the past ten years discloses that very few deaths from this disease have occurred, the presumption therefore being that most of the cases are of mild character. The latter is characteristic of so-called "city typhoid," that is, of that form of typhoid prevalent in communities where the public drinking supply is contaminated. This is explainable on the theory that prolonged existence by the bacillus in such an abnormal and unfavorable medium as water induces a condition of "attenuated virus." In the perfectly well person the ingestion of such bacilli may cause no infection whatever, or may at the most give rise to some disturbance of diarrhoeal nature. This of course serves as answer to the question of the wife of one of the patients interviewed. Though admitting that her husband was in a "run down condition" before being sick, yet she declared that both she and some of her neighbors drank the river water, and if the latter was responsible, "how is it that we, too, are not sick?"

Quality of the River Water as Indicated by Analysis. Unfortunately, our records include but meager analytical data with regard to this supply, it appearing that but five samples, known with certainty to represent the river source, have been examined during the past six years, and it so happens that none of these examinations have afforded any definitely positive evidence of a contaminated condition. But because of the varying character of a source of this nature, a few such widely isolated analyses as these are of no great value in connection with a recognition of contaminated conditions. For example, a sample of the river water collected at one hour might be found to contain many colon, or sewage bacteria, while those collected during several succeeding hours might afford entirely negative results. Again, typhoid bacilli might be existent in the supply at a certain hour during one day and not be present again—at least in numbers sufficient to cause trouble—for weeks. Once such bacteria are removed from their habitat—the body—they commence to die,

and it would be impossible to predict just when, how often, or in what numbers and degree of viability, they will be found finally existent at the point of supply intake. The old idea that a few miles of flow serves for the safe purification of a polluted stream was long ago demonstrated a fallacy, although it is one that may still be frequently encountered. The point, finally, is that it is not necessary in such a case to depend upon analysis as evidence of contamination. The fact that actual inspection reveals that there is such contamination may be regarded as sufficient.

Remedy. The company has a choice between securing a satisfactory supply elsewhere and effecting proper purification of the present source of supply. The quality of the Ammonoosuc River water is normally good, and with efficient treatment would undoubtedly afford an acceptable supply. Whether the process adopted ought to be that of slow sand filtration, or the mechanical variety using a coagulative agent, is something that will require further study to determine, including more extensive analyses than have as yet been made. Pending any permanent arrangement, however, I desire to urge the immediate installation of some method of chlorination treatment. Using chlorine gas, as is now the case at Somersworth, is an inexpensive and simple treatment, and one that can be installed in a few hours.

There can be no question that purification of the water supply will mean the saving in the future not only of lives but of a very considerable amount of the suffering and expense entailed by typhoid fever. While the former cannot be readily reckoned in terms of dollars and cents, the expense incident to lost time, as well as all the items of cost in connection with a long period of illness, can be. And, in so far as the weight of even presumptive evidence only might point to the water supply as being responsible, the owners thereof could undoubtedly be held legally liable for such expense.

Sources of Ice Supply. These were also investigated on the same date. It appears that ordinarily the supply for both the villages of Woodsville and Wells River—furnished by one company—is cut from the Connecticut River at a point some distance above the village, the ice-houses being located on the Vermont side. At times, however, some ice is said to be taken from Crabtree Pond, which is a part of Wells River, situated three fourths mile above the village of that name. Much of last winter's crop, I was informed, came from a small brook a short distance north of Woodsville. All of these sources of supply were visited by me, and nothing of distinctly objectionable character noted, although the ice cut from the brook, because of the lowness of the latter during last winter, is not as free from suspended matter as good quality would demand. As bearing upon the preceding discussion, it may be pointed out that it is now recognized that there is very little risk of infection resulting from ice, a few weeks' storage being sufficient to render such practically sterile. While there could of course be no possible sanction for the cutting of ice from a grossly contaminated water, yet the principal desideratum in connection with ice is that it shall be clean, free from excess of mechanically suspended particles, and afford a clear water on melting. It appears that ice dealers, as a rule, aim to grade their ice as far as possible, the dirtier ice being used mainly for the larger storage refrigerators, where it does not come in contact with food or drink. In the case of the present Woodsville

supply the proprietor informed me that he splits his cakes longitudinally, delivering only the clear stratum where the ice is to be used for addition to water, etc., the inference being that the rest of the cake was thrown away. It was finally admitted, however, that in filling the average domestic refrigerator, such separation of clean from dirty strata was not very rigidly practiced.

Respectfully submitted,

CHARLES D. HOWARD,
Chemist.

July 11, 1913.

ACTION OF THE STATE BOARD.

At a meeting of the State Board of Health held April 30, 1914, the matter of the Woodsville Water Supply was again taken up and considered. It was the unanimous opinion that some executive action would have to be taken before a safe water supply would be furnished by the village of Woodsville.

Many reports have been made in the past showing the polluted condition of Ammonoosuc River and that it constituted a dangerous water supply in an untreated state. The sewage of most of the localities from the mountains to the mouth of the river enters the stream, chief among them being Lisbon and Littleton; not to mention some smaller towns.

The action of the board at the meeting referred to is embodied in the following communication:

THE STATE OF NEW HAMPSHIRE,
OFFICE OF THE STATE BOARD OF HEALTH,
CONCORD, N. H., May 4, 1914.

Mr. G. E. Cummings,
Superintendent Woodsville Aqueduct Co.,
Woodsville, N. H.:

DEAR SIR—At a meeting of the State Board of Health held at the office of the board on Thursday, April 30, a careful review was made of conditions at Woodsville in connection with the public water supply furnished by your company, and the result exhibited the prevalence of typhoid fever there, year after year, tremendously in excess of any other locality in the state in proportion to the population.

The board carefully examined past reports and correspondence relating to this supply, and while much has been expected from your company to remedy the dangerous conditions which have so long existed, it appears that nothing definite has been accomplished, although it is understood that you have employed experts to examine into the feasibility of establishing a chlorination plant.

Inasmuch as the process has proven efficient, and as liquid chlorination

apparatus has been perfected to a degree that makes it practicable, as demonstrated by systems now in use, the board unanimously adopted the following:

"Voted, That the Woodsville Aqueduct Company be and hereby is directed to install, within thirty days, a chlorination apparatus for the purification of water pumped from the Ammonoosuc River, and further that the said company be urged to provide a filtration system in connection therewith."

Per order.

IRVING A. WATSON,
Secretary.

Under date of May 5, the foregoing communication was acknowledged by Mr. G. E. Cummings, Superintendent Woodsville Aqueduct Company, but he stated that thirty days would be too short a time in which to make the alterations necessary to comply with the order, and asked for an extension of at least ninety days.

Following this there was considerable correspondence between the board and the water company, including the consideration of other possible supplies for domestic purposes, the difficulties in the way of accomplishing what was desired, the financial inability of the company to make extensive changes at this time, etc.

The company has never denied the need of improvements, and it is only just to it to say that the water takers have been constantly warned of the dangerous character of the water pumped from the river. Quite a proportion of the community have obtained water from other sources; but there is always a certain percentage of the population that do not heed sanitary warnings of this kind. The frequency of typhoid fever in that locality is evidence of the truth of this statement.

The application for an extension of time in which to comply with the order of the State Board of Health was considered at a meeting of the board on July 9, at which time it was

"Voted, That the Woodsville Aqueduct Company be allowed until October 1, 1914, in which to furnish a safe water supply for the village of Woodsville, either by establishing a separate system from an approved source, or by some treatment of the Ammonoosuc River water as has already been recommended."

In accordance with the order of the State Board of Health, the company established a purification system in connection with its automatic pump, to the satisfaction of the board. The installation was inspected September 14 and as bacterial analyses have indicated a satisfactory degree of sterilization, the system has been approved as calculated to render the water safe for drinking purposes. The treatment (chlorination) is the same as at Somersworth, except that an im-

proved form of apparatus is employed. It should not be assumed that the latter solves the whole problem of water purification in this case. Ultimately a system of filtration in conjunction, such as is in use at Lebanon, Exeter and Berlin, should unquestionably be provided also. However, Ammonoosuc River water is normally of fair quality physically, and the sterilization treatment, if faithfully carried out, can be depended upon to render the supply quite safe with the possible exception of periods when excessive turbidity prevails. At such times it will be desirable to increase the dosage somewhat, and also to keep careful watch as to the character through bacterial examinations.

LISBON.

The following communication received March 27, 1914, is self explanatory:

LISBON, N. H., March 26, 1914.

*Irving A. Watson, Esq.,
Secretary State Board of Health,
Concord, N. H.:*

DEAR SIR—At the recent annual meeting of the voters of the Lisbon Village District, the undersigned were elected a committee to inquire into the service and charges of the Lisbon Water Works, and to act on behalf of the district in making a thorough and comprehensive inquiry and investigation into its water supply, and to this end also to petition the aid of such state boards and commissions as may seem proper and reasonable.

There is a general and well-founded belief in Lisbon Village District that the water supply is not as pure and sanitary as it should be. That certain improvements are not only desirable but necessary is apparent to anyone having but little knowledge of the existing conditions.

We would like your coöperation and advice in this matter. No doubt you will be willing to send a representative here to make suitable investigation and render report. We shall be pleased to aid or coöperate in any action the State Board may see fit to take in the premises.

Yours respectfully,

E. O. CROSSMAN, M. D.,

B. S. WEBB,

G. CONRAD BRÜMMER,

*Special Committee on Water Supply
Lisbon Village District.*

As an initial procedure under the foregoing request for an examination into the conditions attending the Lisbon water supply, the source was visited by the chemist of the board April 6, 1914. Following a recommendation by the latter, the special precinct committee appointed to consider the matter of water supply invited Professor Robert Fletcher to make an investigation, particularly as to certain engineering features in question. The reports of these gentlemen are appended.

The questions both of quality and adequacy of service and fire protection being involved, the committee later addressed a petition to the Public Service Commission, which gave a public hearing in the matter on September 15, 1914, at which hearing both Professor Fletcher and Mr. Howard appeared and gave testimony favorable to the petitioners. The case at this date is still pending, a later hearing being scheduled for the introduction of testimony as to rates.

Dr. Irving A. Watson,

Secretary State Board of Health:

DEAR SIR—The following facts were ascertained as a result of an investigation of conditions pertaining to the Lisbon Water Supply, made April 6 and 7, 1914:

This supply is owned by H. B. Moulton. At a recent precinct meeting a committee consisting of Dr. E. O. Crossman, B. S. Webb, and G. C. Brummer was appointed for the purpose of making a thorough investigation of present conditions, with a view to securing certain improvements believed to be desirable.

The inspection was preceded by a conference the evening of April 6, at which were present Messrs. Crossman, Brummer and Moulton. At this time the fact was brought out that the supply has been subjected to criticism on the ground that it is at times quite turbid, that unsanitary or objectionable conditions exist on the watershed and on the brook leading to the reservoir, and that in certain sections of the village the pressure is inadequate.

It is the committee's desire that the matter be very thoroughly gone into, and that with this in view, an engineer should be employed for the purpose of making such surveys, estimates, etc., as may seem advisable.

As pertaining to the criticism of inadequate pressure, Mr. Moulton offered in explanation a statement to the effect that such was due to an extension of the main pipe system with a smaller bore wrought iron pipe, which latter had become somewhat clogged by rust. It was represented that this condition is to be corrected immediately.

The superintendent claims that the normal Main street pressure, with services shut off, is 108 pounds, or 97 pounds under usual conditions.

The system, which is unmetered and which furnishes water to 1,500

people, has its source in Mink Pond brook, a stream flowing from Mink Pond (now known as Pearl Lake). This pond, situated two miles to the northeast of the village, is about three fourths of a mile long by a half mile wide at the widest part, and is said to include about seventy-five acres. From the southwest extremity to the dam at the reservoir, the flow of the outlet brook is about three fourths of a mile, with an estimated fall in this distance of 150 feet. The reservoir capacity is stated by the superintendent as being approximately 1,000,000 gallons. Throughout the whole distance the highway winds very close to the brook, the natural gorge formed by the hills on either side being no more than wide enough, much of the way, for the comfortable accommodation of both.

It has been alleged that the turbidity always existent in early spring and particularly following heavy showers, is the result of wash from this roadway. The superintendent, however, pointed out that the brook would be turbid at such times were there no roadway, on account of erosions of exposed gravel strata in the bluffs overhanging the opposite side of the brook. The existence of these exposed strata, with opportunity of erosion, was pointed out by Mr. Chamberlin, as well as the attempt in the past to remedy this condition through construction of log coverings.

It was observed that during the greater part of the distance from the reservoir to the pond, the roadway is tilted at a slight angle, so that but very little wash could get into the brook, such going rather into the opposite gutter and being carried off below the reservoir. However, at a point about half way there is a water bar, which serves to convey all of the water into the gutter above the point directly into the brook. Still further up, a small tributary brook passes under the roadway through a culvert, carrying with it the water from the gutter. It is probable that the volume of this small brook is at times too great to permit of its being cut off from the main brook, and instead is conveyed in the gutter to below the reservoir. However, it might easily be carried through a tile under the gutter flow, and also the water bar referred to be removed. I am convinced that were this done, and perhaps some of the bank on the opposite side of the highway cut into a little more deeply, depositing the earth on the brook side, practically all of the highway wash could be handled by the gutter and thus carried below the reservoir. To accomplish this would merely require a little coöperation on the part of those responsible for the care of the roads with the water-works management, a coöperation said to be non-existent at present.

As stated, the superintendent believes that very much of the turbidity is due to wash from the opposite bluffs, and he asserts that each year it has been his custom to draw down the reservoir and clean the bottom, removing in this process several loads of what he represents as being the best of gravel for highway construction.

Although the roadway also very closely skirts the southwest shore of the pond for the distance of a half mile from the brook outlet, it is said that the pond water is always free from turbidity. A sample of such water is to be collected at the pond outlet. At the latter point the shore and bottom are somewhat muddy, though it is stated that the greater part

of such elsewhere is sandy or gravelly. On account of the existent snow and ice, observation in this connection was impossible at the time.

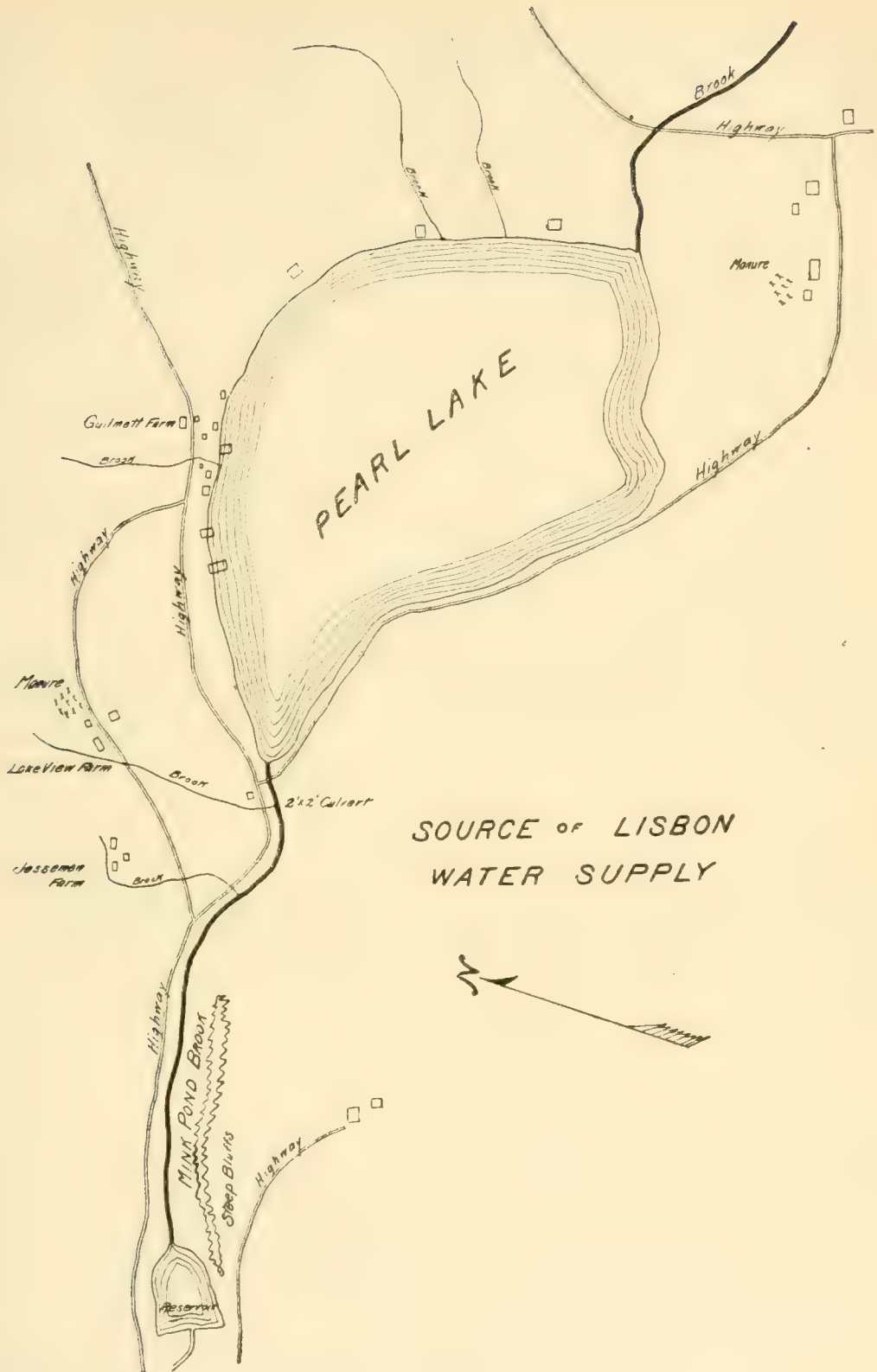
The sanitary conditions observed following a complete circuit of the pond are to be classed as poor. At the upper end of the pond are four sets of farm buildings, two of which are directly on the watershed and distant about a quarter of a mile from the water, the other two being also on the watershed of the brook, which is the main feeder of the pond. The intervening land is under cultivation and slopes at about thirty degrees. The existence of four large manure piles was noted on this part of the shore, the soluble matters from which are bound to be largely carried into the pond during rains, the objection in this respect being much greater at this time and during the winter than it would be during the summer months, the time when people are inclined to imagine there is most danger.

This pond is evidently the result of the natural damming up of a brook in a depression surrounded by hills, Mink Pond brook very evidently being merely a continuation of a good-sized brook which discharges into the pond at the eastern extremity. However, it is doubtless true, as claimed, that the volume of the pond is very largely augmented by springs. In fact, it is claimed that there is a considerable similar increment in the volume of the reservoir brook.

In addition to the main entering brook, the pond also receives the discharge of two smaller streams on the northern shore, not to mention a tiny brook which enters near the ice house. On this northern side, the existence of six summer cottages and of two sets of farm buildings was noted. None of the cottages is provided with a cesspool, it apparently being the custom to allow the sink water and slops to go out on to the surface of the ground. In most cases the privies are located well back from the water's edge. One of the cottages is built out over the water.

The Guilmette farm buildings are located about 500 feet from the shore. Lakeview Cottage consists of a large double farmhouse, with barns and other buildings, situated about opposite the pond outlet. At this place a lot of manure had been gotten out, being deposited so that wash therefrom tends to enter the pond.

Below Lake View Cottage farm and situated on the reservoir brook watershed, is the Jessman farm. The small brook first referred to passes these buildings in its course under the roadway to the main brook (see sketch map). It should be stated that probably the greater part of the pond watershed consists of open land, much of it under cultivation. The northeastern shed is covered with an evergreen growth.



A very serious feature was discovered in connection with the disposal of sewage from the Lake View farmhouse. This is a water-carried system, and it was represented that the discharge was on to the open ground at a considerable distance above the brook. Investigation, however, showed that at this time the sewer discharge was being borne by a small brook down to the lower roadway and thence directly into the main brook.

Abundant evidence of this sewage was observed in the odor and appearance of the water, as well as in shreds of toilet tissue carried down nearly to the small ice house on the main brook. It is obvious that at this time, as well as during showers, this sewage is a serious menace to the safety of the water supply. A septic tank should be constructed as early as possible.

QUALITY OF SUPPLY AS INDICATED BY ANALYSIS.

Laboratory examinations have been limited as a rule to one or two samples only each year—a number in this case insufficient to serve as an accurate guide to the quality of the water at all times. From such analyses as have been made, it is apparent that its character fluctuates widely. As a rule, the content of organic matter is low, and with few exceptions this is also true of the color, so that were it not for such rather frequent physical characteristics as turbidity and earthy or vegetable odor, the supply might be regarded as excellent. Undoubtedly the normal quality of the brook water is good.

RECOMMENDATIONS AND SUGGESTIONS.

While it is very apparent that the system in its present state is, much of the time at least, supplying a poor quality of water physically, and one which under the circumstances noted is necessarily possessed of a certain element of danger, yet it is not possible without further study to state just how the remedy should be applied.

FILTRATION AT THE RESERVOIR.

Were conditions altogether favorable thereto, there could be no doubt that the best remedy, all things considered, would be in the installation of a filter plant at the reservoir. This would satisfactorily care for the turbidity, and also, if properly conducted, counteract the danger on the pond above. At the same time, it cannot be emphasized too strongly that even were such a plant installed, every possible means should be taken to correct the conditions referred to.

It would seem, however, that there is not sufficient room along the brook for any proper filter construction, allowing for filter beds in duplicate and a clear water reservoir of adequate size for fire protection, and the latter at the same time so arranged that the excess brook water shall be excluded. Not only should there be provision for taking one of these filter beds out of commission for cleaning at short intervals, but the matter

of roofing should be considered, unless, as at Franklin, the bed area is so large—involving relatively low service demands—that winter cleaning and removal of ice could be dispensed with.

While the mechanical system of filtration would undoubtedly be somewhat better adapted for handling the turbidity conditions and on a pumped system would probably be in all respects the most suitable, yet this system requires daily attention—something which would add greatly to the expense of operation of a gravity system. However, it should be understood that any system of filtration, to be worth while at all, would demand much more attention than the superintendent is at present required to give this supply, and incidentally it may be well here to emphasize that no consideration should be given to any makeshift sand-bed arrangement, such as has in the past sometimes been attempted elsewhere, with a view to a cheap short cut to water purification.

The feasibility of installing filters on the brook can be determined only following a study of the engineering features involved.

EXTENSION OF PRESENT PIPE LINE TO THE POND.

It is urged that direct uninterrupted draft from the pond is not possible with the present cement iron pipe system, the extra 150 feet altitude involving an excessive pressure. However, it would not be impossible to arrange to pipe to the present reservoir and to conduct the brook water past the latter through a flume.

In my opinion, the argument that the aeration involved in the 150 feet descent in the brook flow serves materially to purify the water need not be given any weighty consideration. It is undoubtedly true that such aeration must serve to some extent for the elimination of any odors that might possibly arise as a result of growths in the pond, and to this extent retention of the brook flow feature is desirable, though by no means indispensable or of so much importance as supposed.

But while direct draft from the pond would serve to eliminate at least the greater part of the turbidity, yet the present sanitary conditions about this pond are such that in order to afford an entirely safe and satisfactory supply, the installation of some form of purification would be essential. Admittedly, a better course—and one which in any event ought ultimately to be followed out—would be the purchase of all of the objectionable watershed property. And herein comes one of the advantages of municipal over private water supply ownership. While it would be feasible for the precinct eventually to acquire at least most of the objectionable property, while the precinct could well afford to conduct its supply without any regard for dividends, and could rest satisfied with such merely paying for itself and for maintenance, in the case of private ownership, obviously dividends must be maintained, and no private interest is likely therefore to incur any extraordinary expense for improvements, if the cost of such is calculated to materially reduce profits for a term of years.

One of the modern forms of chlorination treatment, designed to

provide for uniform dosage under irregular pumpage or delivery might be installed and operated at relatively small cost, either at the pond or the reservoir. In the latter place, while such would serve to sterilize the supply and render it quite safe, it would in no wise solve the problem of turbidity.

In conclusion, reference may be made to the urgent need in a village the size of Lisbon precinct, of some person who shall serve in the capacity of sanitary officer. It is my understanding that at the present moment there is no one charged with looking after the great variety of matters of this character which must arise in the course of the year. In these days, something else than a more or less nominal board of health is required. As showing the situation at Lisbon, there is apparently no regular oversight whatever of this kind as regards the water supply, and concerning certain minor nuisances which the superintendent himself had at times detected, such person seemed to have no idea of how he should act or to whom he should go in order legally to secure their abatement.

The superintendent suggests that regulations* should be issued for the protection of the purity of the pond water. In view of the conditions, I believe this would be a proper request, irrespective of what plans for purification may be adopted.

Respectfully submitted,

[Signed]

CHARLES D. HOWARD,

Chemist.

APRIL 4, 1914.

HANOVER, N. H., May 15, 1914.

Messrs. B. S. Webb,

G. C. Brummer,

E. O. Crossman,

Special Commission on Water Supply,

Lisbon Village Precinct, Lisbon, N. H.:

GENTLEMEN—In accordance with your request under date of May 6, I visited Lisbon on the 8th to look over the situation which the existing water supply presents as affecting the public welfare.

Having already received and duly considered the report of Mr. Charles D. Howard, dealing chiefly with facts and observations which affect the sanitary conditions of the case, it was understood that I was called upon to give special attention to the engineering aspects of the problem; and if it seemed feasible, to suggest improvement of both sanitary conditions and structural features of the system.

It goes without saying that the single aim of all concerned should be to find the essential facts and from them to determine the right procedure without regard to personal prejudices or personal interests. The writer, being an entire stranger in the community and having no personal bias, has endeavored to view the situation impartially, and to make suggestions according to the evidence.

*Such regulations had previously been adopted under date of July 17, 1906.

INSPECTION.

In company with two of your committee a visit was made to the "reservoir"; thence the brook and adjacent highway were viewed as far as the outlet from Pearl Lake, which was examined closely. Trips were made up the roads on both sides of the lake, and the location of all habitations and other structures noted. The Jessman farmhouse was visited to note the conditions of drainage by the brook, which flows past the rear door of the buildings and down into the main brook, below the lake. The drainage conditions from the Lake View House were also observed.

In the afternoon Mr. Gowing, of the firm of Gowing and Chamberlain, courteously granted an interview and answered questions regarding the pipe system, hydrants, etc. Mr. Chamberlain, the superintendent of the works, was reported to be out of town,—not expected to be home until July. Mr. Moulton, the owner, was also reported to be out of town.

In company with one of your committee a test was made of five hydrants at widely separated localities. The pressures were observed, by means of a Standard "test gauge" made by the American Steam Gauge and Valve Manufacturing Company, such as is used by the inspectors of the Associated Factory Mutual Insurance Companies in testing the fire-protection systems of mills all over the country.

It is proper to state also that in the time at command it was not possible to study details closely or make very precise measurements. Altitudes between the village, reservoir and lake were observed by a standard aneroid barometer. The readings, corrected for temperature, are believed to be correct within five or six feet.

Just at this time conditions are probably at their best,—snow and ice gone, streams in medium stage of flow, roads settled and free from dust, and all surface conditions showing the fresh and cleanly aspects of late spring.

COLLECTION AND STORAGE OF WATER.

The storage basin is Pearl Lake, with a tributary drainage area of four to five square miles by guess from "the lay of the land" and volume of the outflowing stream. The outlet is about two miles from and approximately 390 feet higher than Lisbon Main Street, where the brook road joins it. The description of the lake and its vicinity as given by Mr. Howard was verified in all particulars. We may add that on the hill-slopes and brook-courses draining into the lake are at least ten farm-houses and their various outbuildings, seven summer cottages near or close to the edge of the lake, one ice house on the lake margin and one along the roadside not far below the lake.

The stone barrier or low dam at the outlet of the lake has a cheap and even primitive arrangement for drawing water from the lake when it ceases to flow over the dam. A gate is set in the masonry less than four feet deep (judging by the length of the gate handle which had been carelessly left on the ground ready to the hand of any meddler who might choose to tamper with the fixture). Mr. Gowing stated that when the

lake level sinks in a dry time it is necessary to trench the water to this outlet. (A proper outlet *basin* should have been made at this point when the works were built.) At this time a stream of about 2,500 gallons per minute, by estimation, was flowing over the dam, where driftwood had collected, some of which was decaying and therefore affecting the quality of the water injuriously.

From the lake outlet the brook flows a mile, in descending about 150 feet, closely alongside the road. It receives the drainage directly from the Jessman farm buildings. Mr. Jessman claims that these are on a gravel terrace and that all house drainage soaks immediately into the ground, but the brook flows behind the house, through the cow yard where cattle droppings were thickly scattered; and even some distance below, what was evidently soapy sink water stood in the little pools of the brook. The drainage from Lake View House flows directly down to the roadside at the lower ice house and thence in the road ditch to join the Jessman brook.

The "reservoir," so called, is simply a catch-basin which must collect whatever comes down the brook,—muddy water, gravel, leaves, driftwood, fish, etc. Its capacity, by estimation, can hardly exceed half a million gallons, *if kept cleaned out*. It regulates the "head" under which your system operates; but its storage capacity is small, especially in winter when the ice is from two to three feet thick.

As to the brook again, the aeration which the water receives in flowing a mile and falling 150 feet is only slightly beneficial, as Mr. Howard states. But the brook is exposed throughout this mile to trespassers (both man and beast); to matter carried by wind or washed by rain from the road surface; and to the drainage from the Jessman buildings and Lake View House. Right here some may have to be reminded that dangerous or contaminated water does not necessarily have a murky look. The murky or muddy water of western rivers is all that hundreds of communities have to drink, and may be quite healthful. The bacteria or germs of disease are colorless and so minute that only a man very expert with the microscope can detect them. Badly infected and dangerous well water is often clear and sparkling.

COMMENTS AND RECOMMENDATIONS ON THE COLLECTION AREA.

Mr. Howard remarked that: "The sanitary conditions observed, following a complete circuit of the pond, are to be classed as poor." The writer would say that this states the case very mildly indeed. There is great danger of contamination that may cause disease and death in your village. To show what are the possibilities the writer quotes from his report to the Water Commissioners of Claremont, N. H., in December, 1909, on pp. 156-7, N. H. Reports, Vol. 21.

"If there are any who would say that such a policy is prompted by mere fastidious theory, or the newfangled notions of 'sanitary cranks,' let them consider the following facts:

"The Windsor (Vt.) epidemic was not very far away nor very long

ago. There was a case of typhoid fever on a hill farm four miles or more distant, and in the winter time. The infection (typhoid bacillus) from dejecta was washed down the brook into the storage reservoir just above the village. The entire water works system was infected. Hundreds contracted the typhoid fever and many died. There was the usual investigation and report after the mischief was done; the system was pronounced unsafe, and a new source of supply had to be found.

"The circumstances of the epidemic in Plymouth, Pa., in 1885 were quite similar. There were three small reservoirs fed by a mountain stream, along or near which were a very few houses. A man from one of these houses went to Philadelphia and contracted typhoid fever. It was a bad case and the man was sick many weeks. The dejecta were thrown upon the snow and frozen ground and washed into the upper reservoir when the spring thaw came. It happened that on March 26th the superintendent had to thaw out the pipe leading from the upper reservoir to those lower down. The first typhoid case appeared in town on April 9th; after April 12 from 50 to 100 cases appeared daily, and in one day 200 new cases were reported. Out of 8,000 people 1,104 had the disease (almost one in seven) and 114 died. Thus the origin of all this sorrow and desolation proved to be miles away on the mountain side, and it appeared that the typhoid bacilli retained their virulence after lying many weeks in frozen fecal matter and after coming some miles down stream in ice cold water.

"The New Haven epidemic in 1901 is equally instructive. A part of the city is supplied from Dawson Lake on West River, five miles distant. About a mile and a half above the dam a small stream flowed into the river, and about half a mile up this stream was a farmhouse, in which occurred several cases of typhoid fever during January and February. The excreta were thrown into a shallow privy vault without disinfection; this vault was 325 feet from the brook and 40 feet above it. On March 10th and 11th came a heavy rainfall of $2\frac{1}{2}$ inches. Although the lake covered sixty acres, and contained 300,000,000 gallons, it was quite turbid on March 11th. About ten days later the epidemic began in the district supplied by Dawson Lake, *seven miles* distant from the source of infection. During April, May and June 514 cases occurred, resulting in 73 deaths.

"The Ithaca (N. Y.) epidemic of 1903, for the time being practically broke up Cornell University. There were 1,350 cases in a population of 13,156, or more than one sick in every ten. More than 500 homes were visited and there were 82 deaths. There were 3,000 students, hundreds of whom left town, some ill with the disease; these doubtless scattered the disease elsewhere. One episode of the epidemic is worthy of special mention, namely a secondary outbreak which resulted from the infection of a well. This well had been popular among students of a certain district at the time when the public supply came to be distrusted, and its quality was taken for granted. But the wife of the owner was taken sick with typhoid fever during the epidemic, and her dejecta passed without disinfection through the water closet, and into a drain pipe which ran within three or four feet of the well. The joints of the drain pipe were not tight, and the well water which had probably been for some time grossly con-

taminated, finally became infected. As a result, about fifty cases of typhoid fever and five deaths were traced to people who used the water of this well.

"In the Scranton (Pa.) epidemic a reservoir containing one billion four hundred million (1,400,000,000) gallons became infected, so that during December, 1906, and January and February, 1907, 1,155 cases of typhoid fever were reported and 111 deaths.

"The sad experiences of Littleton and Woodsville in this state and St. Johnsbury, Vt., under somewhat different conditions, all teach the same lessons of the prime necessity of safeguarding and vigilantly watching the sources of supply."*

Looking at your situation in the light of all these facts, any candid and well informed observer would say that your water system lacks even the most elementary and obvious safeguarding. Now your local board of health may and ought to apply to the State Board to promulgate the usual "Regulations" for the protection of your water supply. But that is not enough. The most alert and efficient local board cannot be sure of continued obedience to the rules. A special inspector appointed and paid to see that prescribed sanitary conditions are maintained throughout the district would be more effective. But even he cannot watch everybody every minute. Hence I would recommend the following measures as the first and most direct and necessary:

1st. Prohibit all boating (and bathing of course) on the lake. Fishing might be allowed by permit at stated times and under restrictions by your health board.

2nd. Remove all buildings (excepting the ice house) between the margin of the lake and the roadway. As long as summer cottages and boathouses remain close to the water, anything disgusting and injurious to your water supply may happen, in spite of regulations.

3rd. The Jessman brook and all other flow from north of the road and from the road itself, including that from Lake View House, should be kept on that side; and all culverts under the road filled up between the reservoir and the lake. Then if these places cause any nuisance along the roadside, it will be manifest and subject to action by your board of health. This making of a roadside channel would be inexpensive, requiring only enlargement of the present ditch and extension to a point below the reservoir dam. It might require two or three lengths of corrugated culvert pipe to pass beneath the bars which at certain points had better be extended into the hillside (the drainage from the bars being always into the ditch), also a few sticks of dynamite to cut away obstructing ledges at some points; and a few days of labor altogether to complete the grading and surfacing. This would simply come under the head of ordinary road-repairs in the tax levy. Such work, being for the protection of the water supply, is a matter of *the first public importance to a majority of the town of*

*Reports of New Hampshire State Board of Health, Volume 21, 1909-10; facts given by George C. Whipple in his book on Typhoid Fever. John Wiley & Sons, New York. This should be in the town library and read by all public-minded citizens.

Lisbon, regardless of the ownership of the water works; and that majority ought to require that it be done and done promptly.

4th. "The reservoir" should be fenced in by a fence "horse high, bull strong, and pig tight." The writer has seen such a fence in Montana, built without any posts, by use of X frames, and will send you a sketch if called for. So much protection is needed as a mere matter of prudence. Stout square mesh (sheep fence) covered by closer mesh (poultry fence) would deter trespassers, keep out quantities of leaves and arrest drift-wood, etc., brought down by the brook. That there is need of this is shown by the reported troubles with your pipes and my own experience in testing the hydrants, when quantities of leaves were blown out through the nozzles. It is much to be desired that trees growing close to the margin should be cut so as to lessen the chances of leaves falling into the stored water.

5th. Householders throughout the district tributary to the lake should be required to take care of their house drainage on their own premises, according to rules and suggestions heretofore made by the State Board of Health. The primitive privy vault should be replaced by some form of sanitary closet (like the dry earth closet, or septic tank if water is freely used)—as described in the N. H. Sanitary Bulletins of July, 1905, and January, 1911,—to be had free by applying to the writer or to the Secretary of the State Board of Health, Concord. Farmers should be requested not to place manure so that the leachings will run off frozen ground into the lake. *Self-interest* ought to deter them from such practice.

6th. Eventually, if possible, the village should acquire ownership of a margin around the lake at least five rods in width, and from that up to twelve rods or more.

These precautions are imperative and all, excepting the second and last, practicable without much expense.

The complaints as to the quality of the water have been noted in Mr. Howard's report, and also the explanations given by Mr. Moulton and Mr. Chamberlain. As to the turbidity being due to erosion the writer saw little evidence of erosion along the road side. And the opposite bank of the brook appeared to be generally rocky and the stones moss-covered (also abounding with leaves ready swept into the brook by rain or wind). If the log protection mentioned in that report has proved inadequate, certainly a stone protection should be made sufficient for the purpose. In this stony region there is no reason to tolerate eroding banks when a remedy is so simple and inexpensive. That these conditions have been allowed to remain so long seems to be circumstantial evidence that there has been carelessness and neglect on the part both of the public and the owner.

A seventh suggestion is this: In October, after the leaves have fallen, leaves and dead-wood should be raked away from the margins of the brook and reservoir, and burned. This has been our practice about the Hanover reservoir and tributary brooks. The cost is not great and the benefit considerable.

THE PIPE SYSTEM.

The original main pipe system was laid with cement-lined pipe, which Mr. Gowing says has proved entirely satisfactory, being strong enough under the service pressure as it is, always clean whenever opened, and apparently as good as new after more than thirty years of service. But subsequent alterations and extensions have been made with standard cast-iron pipe. This, he says, has given trouble by rusting so rapidly that in some places they have been obliged to renew it.

As the writer has had experience with cast-iron pipes which have been in use in the Hanover Water Works twenty years, and have shown very little rusting (a piece of 8" pipe removed to insert a branch had but few rust spots about the size of apple seeds), he ventures to suggest that if the quality of the pipe used in Lisbon was not of the best, especially if the interior was not thoroughly coated with the best protective coating, the rapid rusting was to be expected. Mr. Allen Hazen, a high authority, says in his book, "Clean Water and How to Get It," (published by John Wiley & Sons, New York. Quotation from pages 59 to 61):

"The way that the process of tuberculation goes forward seems to be something like this: The water flowing, at times slowly, and carrying matters in suspension, deposits some of these suspended matters on the lower half of the pipe. This deposit usually contains a considerable amount of organic matter.

"The iron pipe is coated with tar or asphalt. If this coating were perfect or complete, the deposit would not come in contact with the iron at any point. But there are always blowholes or other minute openings in the coating, and it is through these that the iron is first reached.

"The organic matters in the deposit over the iron are in a state of decomposition; that is to say, they are rotting. This results in the generation of carbonic acid. The carbonic acid acts on the iron through the openings in the pipe coating. It takes some of the iron into solution as ferrous carbonate. The soluble ferrous carbonate diffuses through the water, penetrating the deposit under which it is formed, and reaching the upper surface of it, where it comes in contact with the water flowing in the pipe. A part of the iron mingles with the water in the pipe and goes forward with it. Another part, becoming oxidized by the oxygen in the flowing water, is transformed to the insoluble ferric condition and remains at the surface of the deposit.

"The iron precipitated in this way acts as a coagulant. It coagulates some of the organic matter in the flowing water at the point where the iron is precipitated. It binds the organic matter so precipitated, and that previously deposited, into a firm, compact, but porous mass, and this mass is the beginning of a tubercle.

"The organic matter precipitated by the iron at the surface of the tubercle is so much fuel added to the flame of decomposition, and the carbonic acid resulting from it leads to the solution of further quantities of iron. In this way the process becomes a continuous one.

"The circulation of the liquid through the tubercles, taking the car-

bonic acid to the iron and bringing the iron to the surface, is very slow, and many years may elapse before the tubercle reaches the height of an inch.

"Tuberculation is practically universal in cast-iron water pipes, but some waters cause the action to go forward much more rapidly than others. Tuberculation starts much more freely, and progresses more rapidly, in waters from rivers or reservoirs containing suspended organic matters."

Since the Lisbon water contains not only *dissolved* organic matter usual in surface water but also quantities of leaves which have been allowed to enter the pipes where they must decay, the conditions described by Mr. Hazen are complete and extensive in this case for producing rapid decomposition and tuberculation in the iron pipes.

TESTS OF HYDRANTS.

The first one tested was that near the dead end of the line past the schoolhouse. Upon one hydrant opening was attached a short pipe nozzle in which was inserted a standard (Sanborn) gauge-plug, to which the pressure gauge was attached. To the other hydrant opening, one of the flexible 1" pipe nozzles was attached. At first mud and leaves came out freely during two or three minutes. Also the small nozzle holding the pressure gauge caught four pebbles about the size of large marrowfat peas; also at one time pieces of leaves choked the passage to the gauge which had to be removed and relieved. Here the static pressure was 60 pounds, but with the nozzle in operation the pressure was 10 pounds. This was practically the pressure at base of a 1" playpipe, which by Freeman's tables would indicate a discharge of 93 gallons per minute, through a smooth conical brass nozzle. But this was a flexible nozzle not smooth, and the actual discharge may have been only about 85 gallons per minute. Here is a loss of 50 pounds pressure or about 115 feet head from pipe friction. Some say this dead end has several hundred feet of 4-inch pipe, old and rusty; others say it is only 3-inch pipe. The friction loss for even two streams, or twice 93 gallons per minute, would be, in the entire main line of 8" and 6" pipe, less than 12 feet; hence more than 100 feet of head, equal to about 44 pounds per square inch, is lost in the four inch or smaller main. Whatever may be the length of this part, the tables show that only two streams, classified as "feeble" by Freeman, might be had through 400 feet or more of hose for each one. As *effective* streams they would probably reach less than 30 feet horizontally and less than 25 feet vertically.

At the schoolhouse hydrant the static pressure was 62 pounds, and this dropped to 17 when the stream was turned on. This would allow a little better service, chiefly because the hydrant is so near the house that a length of 250 feet would probably be sufficient. But at best the one or two streams would still be classed as "feeble." It appears from these figures that the region about those two hydrants does not have adequate fire protection.

We may remark here that Freeman's tables are based upon very careful experiments made at Lawrence, Mass., in 1888, alongside high mill buildings where accurate measurements of throw and height of streams were made, and the water collected and measured in a tank. They are accepted all over the world by underwriters, by the American Fire Protective Association, by municipal authorities and others; and hose pipes, nozzles and other equipment are now standardized to agree with Mr. Freeman's tests.

The next hydrant tested was on the same street, at the James Richardson house. This showed 70 pounds static pressure and 38 pounds with the nozzle discharging. Under these conditions it would discharge about 170 gallons per minute through one line of hose, with a throw of 50 feet; classed by Freeman as a "good" ordinary fire stream."

These three tests show that the street main west from Richardson's is all too small, and that it is hardly large enough even there to serve houses 500 or more feet distant. And here we may remark that the hydrants are too far apart. The distance between them should not exceed 600 feet, preferably less. No single hose line at a fire should be over 500 feet long, and of this 100 feet or *more* may be needed to close about the premises. It is a good maxim that "hydrants are cheaper than hose," because the latter is constantly deteriorating and needs continual outlay. This is a good doctrine for the *precinct*; but, with private ownership, the other party might disagree. Moreover, firemen do not realize how much every additional 50 feet of hose cuts down the pressure. Freeman's experiments showed that if a certain stream can be furnished through 50 feet of hose it would require double the hydrant pressure (dynamic or "running" pressure) to serve an equal amount of water through 600 feet of hose.

Furthermore it is a mistake to lay any street main with less than 6" pipe, where hydrants are to be served. Especially true *near a dead end*. In special cases, where the pressure is high, a very few hundred feet of four-inch pipe might be allowed. For instance, to get 320 gallons per minute through 500 feet of 4-inch pipe would entail a loss of about 37 feet of head by pipe friction, and *that* in *clean* cast iron 4-inch pipe; this loss of head may be doubled after 20 years of use *if* the pipe rusts badly (according to Hazen).

Two tests were made on Main Street. At the southwest end the farthest hydrant showed 90 pounds static pressure and 25 pounds running pressure, with only the inch nozzle attached. This very large drop of 65 pounds for only a 1-inch stream shows great loss by friction. This would give rather poor protection to Parker and Young's lumber yard if a fire there should get under much headway under a strong wind. The nozzle alone probably discharged about 140 gallons per minute. With two 500 feet lines of hose the streams might carry 40 feet more or less, and would be classed just beyond "feeble," as fair, ordinary fire streams."

At Hibbard's the static pressure was 98 pounds and running pressure 75 pounds. This pressure maintained at the hydrant would probably deliver 250 gallons per minute through 200 feet of hose and the 1-inch nozzle. We need not say that this region on the main line has the best of protection.

I was informed that Parker and Young have three or four hydrants of their own within their premises. In case of a real conflagration (of which there is serious liability, according to the saying: "That which *may* happen,

will happen, sooner or later") it would be necessary to use all of the hydrants, including the one in the street. This calls for about eight fire streams, of at least 125 gallons per minute each. Even if the 8" main extends down to the premises and well beyond the office, you could not get so much water (1000 gallons per minute) delivered. Assuming that main to be 9000 feet long, over 180 feet of friction head would be developed in the main line alone, as the velocity in the main would be nearly $6\frac{1}{2}$ feet per second. The hydrant connecting pipes being all 4-inch, these with some few hundred feet of 6" pipe would probably more than consume the remaining 70 feet of head, and besides that is the friction in 1600 to 1800 feet of hose (225 feet per stream) which would alone have a friction head of at least 50 feet. At the very best the streams would all be "feeble," unless only 2 or 3 hydrants (giving only 4 or 5 streams) were tapped at once.

Where so much is at stake, not only for Parker and Young but also for the entire village, it would be a wise precaution to make an emergency test to see what is the utmost delivery that can be had at the "dead end." This might be done at the time of a general testing of the hydrants which should be done at least *once* a year, and preferably every spring and autumn, to blow out the mud and "prove" them. This is now not systematically done (by report). This is imperative for hydrants at dead ends. "It goes without saying" that in the layout of street mains the sizes are determined by the demands made upon them for fire streams in emergencies. Much smaller mains would suffice for the house services. It is for that reason that 4-inch mains should be used very sparingly. For instance, a *new* and *clean* 4-inch main 1100 feet long, delivering only 250 gallons per minute, giving only two ordinary fire streams would cut down the hydrant pressure 22 pounds or use up 50 feet of head. If moderately rusted these figures might be 50% greater.

If the precinct owned the water works it would be worth while to connect the two southwestern dead ends by a 6-inch main laid under the river. This would give free circulation in the *loop* and very much improve, not only the hydrant service, but also the house service, because dead ends collect the sediment in the pipe. Of course a proper blow-off gate and extension would be placed at one of the river banks.

In this connection it is proper to suggest that there should be in the office of the superintendent, or other convenient place, an automatic recording pressure gauge which would keep a continuous record of the static pressure on the system, note any unusual variations of pressure, and might lead to detection of unauthorized uses; and would tell the true story of the pressure fluctuations when there is a fire. The cost would be sixty dollars, more or less, for purchase and installation.

SOME LARGER CONSIDERATIONS.

Especially if Public Ownership is Possible.

Assuming that Lisbon is a growing place and has a policy of expansion for the future, the water works need enlargement and improvement. My information is that a shortage occurs every two or three years, and that the use has to be restricted; also that much water is wasted, due to neglect and lack of proper supervision.

Your lake, for its size, is rather shallow; certainly much of the margin is shallow. Your intake being placed in a natural barrier is not deep enough, as I understand it, to draw any water from lower than a very few feet below the full level. A low dam, five or six feet high, built across and over the present outlet would probably *more than double the storage capacity* of the lake, that is the *available* capacity as compared with that at present. This dam would have to be long, and might require some change in the roads.

Furthermore, all uncertainties and trouble about the brook course would be avoided by laying a 6" main from the lake to the "reservoir," with a gate, of course, at the lake outlet to regulate the flow. The distance being about a mile, the cost of this would be probably \$2,200, more or less, for the pipe, and about \$1,300 for hauling and laying, or \$3,500 for the pipe line alone. This supposes the pipe to be laid in a trench about 4 ft. deep along the roadside which would be necessary in our climate. A four-inch main would suffice if it would keep clean.

Some simple construction for improvement and regulation at the "reservoir" is desirable, but this is not the time or place to go into detail. A close estimate of the entire cost of such improvements could only be given after a suitable survey.

Concerning the water channel or ditch on the north side of the road,—if it is made,—those who have it in charge must bear in mind that a very considerable amount of water will come down there in time of a heavy rain. It should be at least *two feet wide on the bottom*, and eighteen inches deep and paved with stone in soft spots. It must take the drainage of more than 200 acres, for a guess, but on that grade the water would flow very fast.

Finally, your continued troubles with leaves and, as I am informed, with fish of considerable size caught in your hose pipes and dead ends, is evidence that the screening is inadequate. (The improvement at the reservoir referred to would include a standard gate-chamber with double screens of considerable vertical height.)

An obvious immediate remedy is a set of two movable *cage screens*, placed tandem, so that one can be raised and cleaned, leaving the other in place. And anybody ought to know that such screens need *frequent attention*, as in case of water-wheel screens.

And again it goes without saying that you cannot have satisfactory operation of such a public utility without painstaking care and intelligent interest for the public welfare on the part of at least one *responsible, well informed and well paid* officer or employée.

Respectfully submitted,

ROBERT FLETCHER,

President and Engineer of

Hanover Water Works Co.,

President of New Hampshire State

Board of Health; Consulting Engineer.

WEST LEBANON.

The Hartford Water Company, of White River Junction, Vermont, supplies water also to the village of West Lebanon. During August, 1913, it became necessary to utilize other than the regular sources of supply. In this connection, Mr. Howard's report, under date of August 28, is as follows:

This company, which is affiliated with the Mascoma Electric Light & Gas Company, furnishes water to both the villages of White River Junction, Vt., and West Lebanon, N. H., the system being a gravity one, consisting of three reservoirs, formed through the impounding of spring and brook water. These sources, located in the hills a number of miles back from the village, were not visited by me. The superintendent states that there is no cultivated land on the watershed at present, all of the farms having been purchased by the company, and that there are no probable sources of contamination.

The total available storage is stated as being about 10,000,000 gallons. On account of the drouth, the volume of water has so far diminished as to have become a matter of concern to the company, and it is claimed that an emergency exists warranting immediate action looking toward additional sources of supply for West Lebanon.

It was pointed out that the Company's charter, granted by the State of Vermont, gives the company no authority to furnish water in New Hampshire, and that in the event of a serious shortage, endangering the welfare of the citizens of White River Junction, such company could be legally restrained from disposing of any part of its supply to its New Hampshire consumers. The Company has about 250 water takers in West Lebanon, the daily consumption being estimated as approximately 50,000 gallons.

Sample No. 11447, forwarded by the Company, was stated to have been collected from a spring. The analysis follows:

Spring, proposed source of supply for West Lebanon.

Odor	Foul
Color .....	.20
Turbidity	None
Sediment	Sl. coarse
Free ammonia .....	.0030
Albuminoid ammonia .....	.0030
Nitrates .....	.010
Nitrites	High
Chlorine .....	.38
Hardness	5.6
Colon bacilli	Doubtful

The above spring was found to issue from a deep, winding ravine at a point about 100 feet from the river bank on the New Hampshire side, and

slightly less than a half mile above the main sewer outfall. The ravine traverses an intervalle, at one point reaching within a short distance of a set of farm buildings. The land to the east consists of high hills, with woodland and pasturage. There is also what is said to be an abandoned slaughterhouse located on the intervalle a few rods from the ravine. However, under ordinary conditions, the only chance for contamination reaching the latter from either place mentioned would be by percolation. Both locations will, however, bear watching.

As the analysis indicates, this water is contaminated at the spring at present, as a result of cattle drinking there. This, however, is a matter that can be easily and satisfactorily remedied. With proper care at the spring, there is apparently no reason why this water should be other than of acceptable quality. The flow, which discharges directly into the river, has been found to be approximately 16,000 gallons daily.

The other sample, No. 11445, taken from the Connecticut River at a point near the New Hampshire side and immediately opposite the spring, gave the following analysis:

Water from Connecticut River about one half mile above White River Junction.

Odor	sl. earthy
Color .....	.45
Turbidity	v. slight
Sediment	sl. flocc.
Free ammonia .....	.0026
Albuminoid ammonia .....	.0110
Nitrates .....	.003
Nitrites .....	.000
Chlorine .....	.05
Hardness	4.0
Colon bacilli	Positive

This river receives more or less sewage from the towns on either bank for many miles above, the nearest sewer outlet of any size above being that of Hanover.

The quality of the water at the present time, as regards color and organic matter, is not so good as that of the Ammonoosuc River supplying Woodsville above. However, the Company's superintendent hastened to disclaim any intention of drawing direct from the river without purification. I was informed that arrangements had already been made looking toward the early installation of a system of rapid filtration, a battery of filters of the closed, or pressure, type being under consideration. It is represented that such a plant would probably be needed each season during from three weeks to three months, and the plan was to put in a steam pumping plant with a total daily capacity, using both spring and river water, of about 100,000 gallons. This water would be pumped directly into the mains on the New Hampshire side, which arrangement would necessarily involve some intermingling of both supplies on either side of the river.

While rapid filters, using coagulant, would be most suitable for treating the river water under the conditions involved, the advisability of employing the pressure type might be questioned. The latter are primarily designed for private or individual use, and though very convenient and easily installed, for municipal filtration they are more expensive as well as less desirable than filters of the open or gravity type, such as are in use at Lebanon, Exeter, and Berlin. The latter are necessarily more accessible and their efficiency more readily and surely controlled.

Attention was called to the hypochlorite treatment, and the desirability was suggested to the superintendent of installing a moderately permanent equipment for this purpose providing for treating the combined river and spring supply—not only for any possible emergency pumping prior to the installation of the filters, but as a regular auxiliary to filtration. This, I was advised, the Company would undoubtedly put in.

It being evident from samples submitted that the process of filtration of river water was not proceeding satisfactorily, on November 29, 1913, the chemist of the board visited West Lebanon for the purpose of noting the character of the plant in use. His report follows:

Dr. Irving A. Watson,

Secretary, State Board of Health:

DEAR SIR—The following facts are submitted relative to the new source of supply of the Hartford Water Company for West Lebanon.

This supply is at present pumped from the Connecticut River, passed through a system of two rapid filters, the filtrate treated with hypo and discharged into an earth basin which also receives the water of a spring. The mixed waters, thus treated with hypo and amounting in all to 70,000-75,000 gallons daily, are pumped into the mains, the excess going into the Company's reservoir on the Vermont side.

Chemical analyses of samples taken November 11, 1913, shortly after operations were commenced, afforded results as follows:

ANALYSIS OF WATER FROM VARIOUS SOURCES.

West Lebanon Supply, November 11.

Data	River 11944	Filtered only 11945	Filtered and Treated mixture 11946	Tap in Village
Odor	Earthy- Vegetable	Earthy- Vegetable	Sl. veg.	None
Color .....	.35	.32	.25	.25
Turbidity	consid.	mod. opal	mod. opal	consid.
Sediment	mod. gray floc.	v. sl.	sl. floc.	Consid floc.
Total residue.....	6.0	5.9	8.3	7.2
Fixed residue.....	4.7	4.0	6.6	5.5
Free ammonia.....	.0010	.0008	.0026	.0022

Data	River	Filtered only	Filtered and Treated mixture	Tap in Village
	11944	11945	11946	
Albuminoid dr.....	.0120	.0130	.0140	.0120
Nitrates .....	.003	.0030	.005	.005
Nitrites .....	.000	.000	.000	.000
Chlorine .....	.11	.10	.23	.20
Hardness	2.4	3.2	3.5	3.6
B. coli	X	X	X	X

X Positive.

The above indicates practically nothing accomplished as a result of the attempt at purification, there being practically no reduction in color or proportion of nitrogenous organic matter, and colon bacilli being present throughout in i.c.c.

However, the plant was new, and good results could not be looked for at once. The next lot of samples collected for regular analysis, on November 25, showed:

Analysis of Samples collected November 25.

Data	River No. 11789	Filtered Only No. 11791	Filtered and Treated No. 11790
Odor	Earthy	ft. earthy	Earthy
Color .....	.40	.06	.08
Turbidity	sl.	v. ft. opal	sl. opal
Sediment	sl. coarse	v. sl	sl. flocc.
Total residue	7.0	6.8	9.0
Fixed do.	4.0	4.8	6.5
Free ammonia .....	.0010	.0008	.0008
Albuminoid do. ....	.0124	.0074	.0080
Nitrates .....	.003	.003	.003
Nitrites .....	.000	.000	.000
Chlorine .....	.10	.10	.20
Hardness	2.3	3.2	3.6
B. coli.	X	Negative	Negative

The above indicates much better work. Physically, the improvement as a result of filtration, is good, the color being reduced to a very low degree, and the organic content also reduced. No coli were found in i.c.c. of either the filtered, or filtered and treated samples.

Samples collected for bacteriological counts showed:

Source	November 17.		B. coli	
	Bact. per cc.		1 c. c.	10 c. c.
River	10,000	25,000	X	X
Filtered only	8,000	21,000	X	X
Filtered and treated.....	10	1,100	—	—
Tap in village.....	3	125	—	—

Source	November 24.		B. coli	
	Bact. per cc.			
	Body Temp.	Room Temp.	1 c. c.	10 c. c.
River	25,000	High	X	X
Filtered only	5,000	310,200	—	X
Filtered and treated.....	18	4,280	—	—
Tap in village.....	100	4,000	—	—

X Positive. — Negative.

The results of November 17 indicate but 20% of the bacteria removed by filtration. Results on the treated samples were satisfactory as a whole—excellent on the agar growths, although one sample gives a rather high gelatin growth. It is evident, however, that the dangerous varieties of bacteria are pretty thoroughly eliminated.

The November 24th samples indicate an exceedingly dirty condition of the river, bacterially. In view of this, the removals by hypo. are to be regarded as good, although the residual bacteria growing on gelatin are too numerous. The number growing at 37° C. is, however, well reduced. Bacterially, the filtered water shows up better than on November 17, at least to the extent that a large proportion of the 37° bacteria present are removed, although the residual is, of course, far too high.

The color removal was good, the raw waters reading 0.35 color, as against 0.05 for the filtered—i. e. practically complete removal.

It being apparent that, bacterially, the working of the filter is far from satisfactory, I went to West Lebanon on November 29, and found the following conditions:

The pump shed is located just under a high bank some 20' above the river level and contains the battery of two pressure filters in addition to the high service pump. Water from the river is pumped to these filters by means of a small low service piston pump. Pumping is continuous during the 24 hours, the amount taken from the river varying from 50,000 to 60,000 gallons, this being augmented by about 15,000 gallons of spring water, the total daily pumpage, therefore, amounting to 70,000-75,000 gallons. This water traverses the mains of both villages, the excess going to the reservoir on the Vermont side.

The filters consist of two upright units of the closed, or pressure, type, connected in series—i. e. the water after passing No. 1, is conducted through No. 2 with a view to effecting further purification. No. 1 is filled with sand; No. 2 with animal charcoal. Immediately at the influent of No. 1 is the coagulant pot, there being therefore no opportunity whatever for sedimentation previous to entering the filter.

After passing No. 2, the effluent receives a dose of hypo. and is discharged into an open earth basin, which also serves as a reservoir for the accumulation of the spring water, the mixed waters being thence pumped into the system.

It is represented by the management that this is but a temporary plant and that with a few days of good rain it would be abandoned in favor of the regular supply. However, the latter has now been very low for a number

of months, and the chances are that the present source will have to be resorted to for some time yet. This being the case, it is evident that certain changes in the present arrangement should be effected at once, in order that a dependable supply of reasonable purity may be furnished.

Fortunately, the company has not permanently acquired the filters. The latter, being of the pressure type, are not only undesirable for the end in view, but also in this case fail to serve one of the principal objects in their use, viz.; the avoidance of double pumping. Furthermore, they are much too small for the service demanded of them. The internal diameter is not more than 32", corresponding to an area of 5.6 sq. ft., i. e., to a minimum hourly capacity of but 672 gallons, or a daily capacity of about 16,000 gallons. Under the present arrangement it would not be correct to assume 32,000 gallons for the two filters, for the reason that No. 2 does not, properly speaking, act as a filter, but as a final clarifier. While it is true that under favorable conditions, the 16,000 gallon rate can be materially exceeded, with good results, yet the present maximum rate of 60,000 gallons is far beyond anything that could properly be expected of this filter, arranged as at present, even with the best of conditions.

In my opinion the No. 2 filter is at this time accomplishing but little. The only object in the use of charcoal is for brightening up the appearance—for removing the last traces of color from an already clean water. As a bacteria remover, this charcoal bed, under the conditions of use, is bound to be nearly if not quite, useless, and it should never have been employed in a situation of this character.

My recommendation would be that this charcoal bed be removed, and be replaced by one consisting of about 30"-36" sharp sand, underlayed by a few inches of gravel and pebbles. The system should then be connected up to work "in parallel," i. e., each to receive raw water simultaneously. By the present series arrangements, the coagulated material necessary to form the filtering film would be lacking in the second filter.

As to coagulation and sedimentation: The present absolute lack of any provision for the latter is a very serious defect and one that must be remedied by some means or other. By far the best arrangement would be to continue the raw water line from the point where the coagulant at present enters, direct to a tank or basin located on the bank immediately above the pump shed. This basin should be of such capacity that the water would consume at least one hour in its flow through it to the filters. It should be provided with baffles and an overflow dam over which the water would pass to the filters—also with an outlet and hose connections for washing out the separated sludge.

A much less desirable substitute for this, but one which might serve temporarily, would consist in the employment of a steam boiler or similar container, the water being conducted in a sufficient distance above the bottom and drawn off at the top to the filters.

At present these filters are washed as often as once in two hours, which is evident in itself, obviously, of the heavy load to which they are subjected. The bed is in a continuous state of disturbance, the interval between an overload on the one hand, and lack of "ripeness" on the other being very short. A uniformly pure filtrate is therefore impossible.

I find that the coagulant tank is filled about every three days with 75 lbs. of alum, corresponding to 25 lbs. per day, or at the rate of nearly three grains per gallon. This seems like a rather heavy dosage until it was discovered that the compound in use was ordinary potash alum, and not the usual sulphate of alumina. The alum as purchased is said to cost about $3\frac{1}{2}c$ per lb. As it goes only about two-thirds as far as sulphate of alumina, this makes the cost, as compared with the latter, about 5c per pound, whereas sulphate of alumina is delivered in this state to the local R. R. station (Penna. Salt Mfg. Co., Philadelphia, Pa.) in 400 lb. bbls., at a cost of but \$1.15 per hundred.

It may be pointed out that alum is a double salt, consisting of a mixture of aluminum sulphate and potassium sulphate. The latter not only accomplishes nothing in connection with water clarification, but represents so much additional chemical permanently contained in the water.

Hypo. Treatment. Thus far nearly the whole burden of rendering the water safe has fallen upon this agent. It is represented that a pound can be used a day to the 75,000 gallons treated (spring and river water). This would be at the rate of about 13 lbs. per million gallons, or a little more than .50 parts chlorine per million—a dosage somewhat larger than is employed in the average treatment, although nothing like up to the maximum which might be used.

As a matter of fact, I find that the cans of bleaching powder, marked "net weight 13 oz.," actually contained but 12 oz., corresponding to a treatment of 10 lbs. per million gallons, and as this powder tests a trifle less than 29% (instead of 35%) the actual rate of treatment is but .33 parts chlorine per million—a very moderate rate. For the present, I would advise that the amount used be increased about one half—not more.

The present apparatus for applying the treatment is open to the criticism of being somewhat too crude to afford uniform results. This includes but one barrel, and there is no automatic means of securing a constant discharge. It is recommended that two barrels be added to this equipment, one for mixing, the other for reserve; also, that an orifice tank be connected as indicated in the Bulletin. At present, it is the practice to make up the hypo. solution while the filters are being cleaned. This does not afford proper time for settling, and means that there must either be a period while filtered water is not being treated, or else that the process is interrupted through the clogging of the valve by the unsettled solution. As it is absolutely essential that this vital part of the treatment be *continued uniformly and without interruption* during the whole 24 hours, it is evident that to avoid the expense of \$50 or \$60 needed to secure proper equipment would prove very poor economy. Even while the filtered water is not discharging into the basin, I believe it would be well to continue the flow of hypo. solution.

Attention may be called to the fact that the spring referred to is at the termination of a deep, winding ravine, which is not only used to some extent as a dump, but also receives a certain amount of sewage and farm drainage. Although this ravine is normally dry, during the spring freshets a large amount of water is said to come down, and this fact would neces-

sarily involve, at such time, the abandonment of the present spring supply.

In conclusion, the recommendations herein contained may be summarized as follows:

(a) Provision for sedimentation, (b) Substitution of sand for charcoal in filter No. 2, and changing connections, (c) Advisability of use of aluminum sulphate in place of common alum, (d) Improvement of hypo. apparatus, (e) Extension of filter effluent pipe to a point close to pump intake and at about the same depth.

Respectfully submitted,

[Signed]

CHAS. D. HOWARD,

Chemist.

CONCORD, N. H., December 1, 1913.

CONCORD.

Criticisms having arisen from certain sources relative to the purity of the Concord water supply and examination of conditions on the watershed was made during December, 1913, by the chemist of the board, the following statement being rendered to the local health officer:

*Mr. C. E. Palmer, Health Officer,
Concord, N. H.:*

DEAR SIR—Complying with your request I am handing you a statement of my opinion concerning the character of the Concord water supply based upon the results of analyses and following a tour of the watershed made December 18 in company of Superintendent Sanders and yourself.

First, as regards the quality indicated by analysis: Such examinations, as made from time to time, show no great variation in character. The results of analysis of a sample taken December 13 from a tap in the state house represent normal data for the season and are indicative of excellent quality for a surface water. Bacteria of intestinal origin are absent, the proportion of organic matter is not large, and the degree of color is extremely low—in this respect comparing very favorably with a good spring water. While a certain amount of odor is inseparable from a water in part of surface origin, at this time both odor and taste are practically unnoticeable. In short, so far as analysis can show, there is nothing whatever about this water likely to prove a cause of disease.

The condition of the shores at this time is excellent, and Superintendent Sanders deserves commendation for the improvements achieved during the past two or three years in the way of cleaning up along the water's edge. With the exception of a short stretch between the two school boathouses the Long Pond shore above the intake is free from mud and, on the whole, presents an attractiveness of appearance very seldom excelled and not often equalled in the case of any supply anywhere.

The situation as regards summer cottages has, as you know, undergone considerable improvement of recent years. There are still a few cot-

tages remaining on the eastern watershed but no unsanitary conditions were noted. On the west side, the Holden cottage, because of its insular location, and the Young cottage present some rather undesirable features, although considering the location, the sanitary arrangements are as good as they well could be. While I believe that the likelihood of any direct seepage into the pond from these places is decidedly remote still there is no denying that the elimination of these cottages would be an improvement.

The same opinion might be expressed with regard to the large cess-pool located on the state hospital cottage grounds. The presence of such repositories on the shores of a body of water constituting a public supply is certainly far from being an ideal circumstance, although as a matter of fact such endanger the purity of the supply to an infinitesimal degree only. In fact, the only time involving any actual danger whatever is during the process of cleaning out.

Nor is the actual degree of defilement resulting from boating, fishing, and surreptitious bathing much greater, if we consider the size of the body of water and bear in mind its natural capacity for self-purification through chemical and biological agencies. In short, all of these features are to be objected to almost, if not quite, as much from esthetic considerations as on account of any real likelihood of causing appreciable pollution.

The only condition noted really warranting an emphatic objection was in connection with the disposal of manure at the new Sunnyside Farm belonging to the State Hospital. The present arrangement is such that there is very serious danger under certain conditions of direct drainage into one of the principal brooks feeding the pond. It is stated that a promise had been secured that this condition would be corrected through the construction of a cemented retaining wall. Such should be put in without further delay.

Conclusions. There would seem to be no sound basis for any belief that there is any direct relation whatever between the present quality of the water and the prevailing sickness. And as regards absolute immunity from infection in general through the medium of water, it may be stated that those who choose to buy water by the gallon have no such immunity—although they may have physically better water.

The question has been raised if the State Board of Health, acting within its police powers for the protection of the public health has not sufficient authority to prohibit boating and fishing in the case of a body of water devoted primarily to the purposes of a public water supply, even though such pond does come within the classification of state property. It may be pointed out, however, that the establishing of such a precedent might later prove embarrassing in the case of such larger supplies as Lakes Witnepsaukee, Sunapee, and Canobie Lake.

Recognizing the principle that too great care of a city's water supply can scarcely be taken, and that no surface source derived from a populated watershed can ever be deemed absolutely safe the city may well, in my opinion, give consideration to the adoption of some one of the modern forms of sterilization treatment. Such a treatment, which is in line with

that recently adopted by numerous other municipalities making use of a surface source, could be readily installed at a cost probably not exceeding one or two thousand dollars, and the operating cost would be almost negligible.

Not only would the water thereby be injured in no respect whatever but there would be a tendency to reduction of odors and tastes, as well as the final elimination of any possible likelihood of diarrhoeal infections from this source. It should be understood that this involves merely a question of desirability, not of necessity—yet considering the inexpensive insurance and the extra popular sense of security which the public service of a practically sterile water would afford, I believe that it would be well worth the moderate expense involved.

Respectfully submitted,

CHARLES D. HOWARD,
Chemist.

DECEMBER 20, 1913.

The opinions expressed in the above report having been those of a local man, and the agitation referred to continuing, the board of water commissioners decided to employ Professor George C. Whipple, of the firm of Hazen & Whipple, water engineers of international reputation, to make a careful and elaborate investigation of the whole situation. Following is Professor Whipple's report:

REPORT OF THE WATER SUPPLY OF CONCORD BY GEORGE C. WHIPPLE.

July 13, 1914.

Mr. Percy R. Sanders,
Superintendent of the Water Works,
Concord, N. H.:

DEAR SIR—In accordance with the request of the President of the Water Commissioners, I have made a careful sanitary inspection of the water supply of your city, and I hereby present my report.

In preparation for the investigation I have examined the Annual Reports of the Water Department, the reports of the Concord Health Department, and the analyses that have been made from time to time in the laboratory of the State Board of Health. I have also read certain reports on the quality of the water made by Dr. Charles D. Howard, the chemist of the State Board of Health.

In the forenoon of Friday, June 26th, I made an inspection of the catchment area in company with you and Dr. Howard. On this trip samples of water were collected and tested for the presence of algæ, etc. I also visited the high service reservoir and the pumping station. In the afternoon of the same day an inspection of the reservoir was made, using a launch.

As a result of these investigations it is my opinion that the city of Concord has an excellent water supply. It is safe and sanitary and there is no

reason why it should not be used for drinking and for all domestic purposes. It is unnecessary to boil it, and it is unnecessary for the citizens of Concord to purchase spring water from fear that the water drawn from the taps is not safe.

The Board of Health records of the city show no indication that the water has been the cause of typhoid fever or diseases which may be spread through the agency of a public water supply. The water is attractive in appearance, almost odorless, clear and nearly colorless. It is soft and palatable.

The odor of the water is the only physical quality which seems likely to be occasionally at fault. All New England lakes and reservoirs are affected occasionally with growths of microscopic organisms. Some of these produce unpleasant tastes and odors. There is no question but that such growths of organisms occur in Penacook Lake and they will doubtless occur in the future. Unpleasant as they may be, there is no reason to believe that the odors or the microscopic plants which cause them are deleterious to health. They should not occasion alarm as they do not indicate infection of the water. At the present time the water has no odor due to this cause.

Having made this general statement, I will now discuss some of the conditions in detail and call attention to certain matters which, in my judgment, should be attended to.

The Cleanliness of the Catchment Area.

When surface waters are used without purification, they should be collected from a catchment area that is reasonably clean and free from pollution by fecal matter. The records of the Water Department state that the catchment area of Penacook Lake is about three square miles. The area of the lake is about 338 acres, and to this should be added about 30 acres which represents the area of Forge Pond, now practically a part of the lake. Forge Pond has a catchment area of about 200 acres. The lake has a total length of approximately two miles. The catchment area comprises woodland and farmland. On the west side of the lake a highway extends from the lower end of Forge Pond to the extreme upper end of the lake. Its distance from the lake shore varies from 500 to 2,000 feet except at the two ends of the lake where it approaches closely to the shore. A part of the catchment area of the east side of the lake is also traversed by a highway, but this is at a considerable distance from the lake.

There are on the catchment area somewhat over a dozen dwelling houses occupied permanently throughout the year. All of these were visited by us. The premises were examined and information obtained as to the number of persons and farm animals at each place. As a result of this hastily made census it was found that the permanent population of the catchment area is about 75 persons, or something less than 25 persons per square mile. During the summer this population is increased by an indefinite number of persons who temporarily occupy the cottages along the shore of the lake. It seems probable that during short periods of the sum-

mer season the population of the catchment area may be considered as about 50 per square mile. There are about 100 cows and between 30 and 40 horses kept at the various farms. At Sunnyside there is a poultry yard where about 700 hens are said to be kept. There seems to be nothing abnormal for a farming region on this catchment area, if we except the cottages which are located near the lake shore.

There are no artificial sewerage disposal systems on the watershed. The sanitary conveniences at the different houses include privies and cesspools. Most of these are satisfactorily located with respect to the lake. The soil of the watershed is generally porous and well adapted to the reception and natural purification of the liquids from the cesspools. The largest cesspools are those at the State Farm, but they are located several hundred feet from the lake in sandy soil and there is not the slightest reason to believe that any of the contents reach the waters of the lake by percolation. There are one or two cases where there is an opportunity for surface water to carry household wastes into the lake at times of rain, but these are matters that can easily be corrected and have all been brought to your attention. The chief danger from cesspools, however, is not while they are in use but at the time when they are being cleaned. In some cases we are informed that it was the practice to dispose of the contents on the surface of the ground, but in a number of instances the practice is to bury the fecal matter in the ground, covering it with earth. This is the proper method and should be insisted upon, whether the privy be located near the lake or at a considerable distance from the lake. The object of this is to avoid accidental contamination of the water.

While it is true that animal manure does not cause typhoid fever, yet this substance should be kept out of public water supplies. Obviously, it is impossible to eliminate all animal manure from catchment areas which include farms and farm lands. Cows, sheep, and other animals require water and it is but natural that they seek it in streams and ponds. In this way all surface waters become more or less contaminated. Even streams which drain nothing but forest lands may become contaminated from the manure of birds, squirrels and other warm-blooded animals. These sources of contamination are relatively unimportant from a hygienic point of view when compared with pollution by human fecal matter. In the case of the water supply of Concord, the water is subjected to long storage before it flows to the city, which causes the danger of even the animal contamination to be reduced to a minimum. The use of manure on plowed fields is a natural use of the land. The washings of fields thus manured is bound to enter the lake at certain times of the year. While this is a source of contamination that cannot be wholly eliminated, it should be reduced when possible. Often this may be accomplished by friendly arrangements with the landowners. Some of the fields of the State Farm are located near the lake and it is said that during the past season this land was heavily manured with the result that the washings entered the lake. This condition might and should be prevented. When manure is applied to land on watersheds ridges at the bottoms of the hills should be constructed to retard the surface flow, and cause more of the water to soak into the ground

before reaching the lake. This would benefit the farmer as well as the water supply. The poultry farm maintained by the state is another possible source of contamination by animal manure. While these are matters that should be attended to, I do not regard them in the present instance as being serious. The analyses of the Concord water made by the State Board of Health do not indicate any marked contamination from this source.

For the most part, swamps are conspicuously absent on the catchment area and accordingly the color of the water is very low. There is, however, a small swamp at the upper end of the lake which, in my judgment, should be drained. At the present time it forms a breeding place for microscopical organisms.

The summer cottages along the shore deserve special consideration. Here, if anywhere, the waters of the lake are in danger of contamination by human fecal matter. Many of the cottages have been already purchased by the city. This general policy of the Concord Water Board is one which I approve. The city should control the entire shore line of the lake in order to prevent the sources of contamination from being located too near the water. This does not necessarily mean that it is necessary for the city to actually own all of the land along the shore. Doubtless arrangements can be made by which the owners of land will take adequate precautions against contamination. The wisdom of purchasing any given piece of property must depend largely upon the price for which it can be purchased. The present situation does not warrant the paying of excessive prices for the mere sake of holding title to the shore line.

I have inspected the premises at the St. Paul's School boathouses, and find the sanitary arrangements to be satisfactory. The water used in the shower baths does not enter the lake, but is discharged into the ground. It is my judgment that the use of the lake for boating carried on under proper restrictions is not deleterious to the hygienic quality of the water supply of Concord.

Summer Versus Winter Conditions.

It is a well-known fact that the typhoid fever bacillus does not multiply in water. If the germs of this disease get into the water they do not live many weeks, and very few of them live more than a few days. They are able to survive much longer in cold water than in warm water, and it is a fact that most typhoid fever epidemics which have been traced to water have occurred during the colder months of the year, and that water-borne typhoid fever is more common in northern than in southern latitudes. Surface waters are less likely to transmit intestinal diseases during the summer than during the winter. This tends to minimize the effect of temporary summer pollution on the watershed, the effect of summer cottages, and the effect of accidental contamination from persons who boat or fish on the lake or along the shores. Furthermore, sedimentation, the disinfecting influence of sunlight, and other destructive agencies combine to minimize the effect of contamination during warm weather.

The Typhoid Fever Record at Concord.

The typhoid fever record of Concord for many years has been exceptionally good. Data received from the local Board of Health and hereto appended have indicated that during the twelve years from 1902 to 1913, the largest number of deaths from this disease in any one year was four, while during two of these years there were no deaths from typhoid fever. The maximum typhoid fever deaths per 100,000 was 18.3, the average, 10.3, and the minimum 0. These records compare very favorably with those of cities supplied with filtered water or with well water. Even more significant than this low typhoid fever death rate is the distribution of the typhoid fever cases during the year. The records show that most of the cases have occurred during the late summer and autumn, and that the number of cases of this disease occurring during the winter has been very small. Since water-borne typhoid fever occurs chiefly in cold weather this distribution would not have occurred if any considerable amount of this disease had been caused by the public water supply. To me, the figures mentioned are significant and indicate unmistakably that the water supply of the city has been safe.

Objections to Surface Water.

It must be admitted that there are certain inherent objections to a water supply taken from the surface of the ground. One of these is the possibility of accidental contamination by the fecal matter of some person who happens to be sick with typhoid fever, or who is one of those unfortunate individuals, who, having had this disease, retain the germs of it in their system for long periods of time. Such persons are termed "typhoid fever carriers." It is said that in round numbers about one person out of every 40 or 50 who have had this disease remain carriers for a considerable period of time. Fortunately the number of typhoid fever carriers in the country at large is decreasing, for the reason that this disease is being gradually stamped out. It is partly because of the danger of this accidental contamination that sanitary engineers favor the filtration of surface waters. It is recognized, however, that storage is an important agency in protecting a water supply against accidental infection, and the long storage provided by Penacook Lake is in itself an important factor in the local problem.

Another objection to the use of surface waters is from the growth of microscopic organisms which takes place in waters stored in reservoirs and lakes. In respect to these growths great differences are noticed between different parts of the country, and sometimes between different lakes and reservoirs quite near together. The effect of these microscopic organisms, most of which belong to the vegetable kingdom, is to make the water slightly turbid and produce unpleasant tastes and odors of water at certain times of the year, chiefly in summer. Penacook Lake is not entirely free from such growths, and the water occasionally acquires a vegetable and woody, or it may be a fishy odor. At the time of my inspection the water contained only a few of these organisms and the odor which they produced was practically negligible. Algæ have been observed in the waters of the

lake for many years. They were mentioned by Dr. T. M. Drown in the report which he made to the city in the year 1891. Apparently, they have been no more numerous in recent years than they were then. The growth of these organisms depends upon many different conditions which cannot be discussed at length in this brief report. One of the important factors, however, is the food supply which they demand. Manure is used to fertilize the land and contribute to the growth of the crops. When it is allowed to wash into the lake it tends to fertilize the lake and contribute to the growth of microscopic plants. This is one of the reasons why care should be taken to exclude surface wash from Penacook Lake.

Stagnation.

In this latitude all lakes which are as deep as Penacook Lake undergo two periods of what is called "stagnation," one during the summer and one during the winter. At these times the water at the bottom does not mix with the waters above, and it usually becomes foul through the decomposition of organic matter. Following these periods of stagnation the foul water becomes mixed with the waters above and may give rise to noticeable odors. At such times also microscopic organisms are likely to develop and add to the odor. In all probability this condition occurs in Penacook Lake, but thus far it has not been studied.

Nothing can be done to prevent this, and it is mentioned here merely to explain why it is that during the spring and fall there is a slightly noticeable odor to the water.

Cleanliness of the Distribution System.

The water supply of Concord is taken from the lake at a point several hundred feet from the gatehouse. It first passes through a brick conduit laid along the bottom of Forge Pond. It then passes through two sets of screens in the gatehouse and flows to the city through cast-iron pipes. An inspection of the screens showed an accumulation of organisms of various kinds. On the screens were found leaves, small fish, frog spawn, fragments of water plants, fresh water sponge, and more or less miscellaneous debris. It is probable that the conduit at the bottom of the lake is not entirely clean and that growths of fresh water sponge are there present. This pipe moss, as it is sometimes called, is almost always present in conduits through which surface waters are flowing. The algæ, above mentioned, serve as food for these pipe organisms. Practically the only harm they do in the pipes is to occasionally make the water slightly dirty and turbid in some parts of the city where by reason of excessive draughts they become dislodged.

Samples taken by us from certain of the taps of the city showed that in most cases the water was exceptionally free from turbidity. A sample from the tap in the State Laboratory, however, contained a considerable amount of sediment, which was evidently derived from the pipes.

I have suggested to you that the screens of the gatehouses be cleaned daily during the summer season and that the pipes of the city be thoroughly flushed by taking certain streets, one at a time, and increasing the velocity of the water through the pipe so as to thoroughly clean out any accumu-

lated dirt. A velocity of about 8 feet per second is needed for efficient flushing. To do the work properly will require several weeks. It should be done at night.

High Service Reservoir.

The water in the high service reservoir appeared to be free of algæ growth at the time of our inspection.

Water Analyses.

I have examined with care the analyses of the Concord water which have been made by Dr. Howard in the laboratory of the State Department of Health. The methods used have conformed to standard methods.

The chemical analyses have been more complete than is necessary. It would be useful, however, to have microscopical examinations of the water made regularly by the Sedgwick-Rafter method and by the use of the cotton filter. It would also be useful to maintain records of the number of bacteria in the water and the approximate number of *B. coli*. At present these tests are made, but infrequently.

Quantity of Water Available.

At the present time there are no records which adequately show the quantity of water that is being used by the city. It is thought, however, that this quantity is not far from 3,000,000 gallons per day. If this figure is correct, it seems probable that the limit of the capacity of the catchment area of Penacook Lake has been nearly reached, and that the most important problem of the near future will be to secure an additional supply of water. The level has been below high-water mark for a number of years. The chief reason for this probably has been the recent lack of rainfall, but doubtless an increased water consumption has been another reason.

In anticipation of the need of additional water, it seems to me that immediate steps should be taken to secure accurate records of the water now being used, and I recommend the installation of Venturi meters on the pipe lines leading to the city. The expense of these meters would not be large and the definite results obtained would be of great value to the city.

Conclusion.

In conclusion, I wish to express my thanks to the Mayor, and the members of the Water Board, the Secretary and Chemist of the State Board of Health, and yourself for affording me the ample opportunities for conducting the present inspection. And I wish to congratulate the citizens of Concord on having at hand such an excellent water supply as that of Penacook Lake.

Attached to this report will be found certain data in regard to the typhoid fever records of the city and some of the cotton discs which were used in the examination of samples of the sediment found in the water in different parts of the system.

Yours respectfully,

[Signed]

GEORGE C. WHIPPLE,
Consulting Engineer.

CONCORD, N. H.

TYPHOID FEVER DEATH RATES, 1902-1913.

Year.	Population.	Typhoid Fever Deaths.	Typhoid Fever Death Rate per 100,000.
1900	19,632	..	....
1901	19,819	..	....
1902	20,006	3	14.9
1903	20,193	3	14.8
1904	20,380	1	4.9
1905	20,566	3	14.6
1906	20,753	3	14.4
1907	20,940	0	0.0
1908	21,127	1	4.7
1909	21,314	4	18.8
1910	21,497	0	0.0
1911	21,684	3	13.8
1912	21,871	4	18.3
1913	22,058	1	4.5
Average, 1902-1913,			10.3

NUMBER OF CASES OF TYPHOID FEVER REPORTED TO THE CONCORD BOARD OF HEALTH DURING THE MONTHS FROM JANUARY, 1902, TO DECEMBER, 1913.

Year.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1902	0	0	0	0	1	2	2	0	13	4	0	1	23
1903	0	2	0	1	0	0	1	0	2	6	3	2	17
1904	0	0	0	0	0	1	5	0	2	3	1	0	12
1905	3	1	1	0	1	3	0	1	0	8	4	1	23
1906	3	0	0	1	0	0	5	8	5	5	2	3	32
1907	2	2	2	0	0	0	0	0	2	0	3	0	11
1908	0	0	0	1	0	0	0	2	0	3	0	0	6
1909	2	0	2	0	0	1	2	2	3	11	3	2	28
1910	1	1	0	1	1	0	0	6	1	2	1	2	16
1911	1	0	2	1	0	1	0	0	1	2	2	0	10
1912	0	0	0	0	0	2	1	1	9	2	0	0	15
1913	0	0	0	0	1	0	2	1	2	1	2	1	10
Total	12	6	7	5	4	10	18	21	40	47	21	12	203

NOTES.

1903. "Large number of cases traced to sources outside of city."

1904. "Source of most of these cases was located beyond the limits of the city."

1905. "Several of hospital cases were brought here for treatment from other places."

1906. "Largest number of cases ever reported to this office in one year * * * widely scattered over the city. Several trace their origin outside."

STATE BOARD OF HEALTH.

1909. "Eight of these cases were brought to the hospitals from out of town."

1910. "Origin of several of these cases was traced to sources outside of the city."

THE STATE OF NEW HAMPSHIRE,
STATE BOARD OF HEALTH,
LABORATORY OF HYGIENE, STATE HOUSE.

Mr. Percy R. Sanders,
Superintendent of Water Works,
Concord, N. H.:

DEAR SIR—While appreciating the opportunity kindly afforded by you, any extended comment from me upon Professor Whipple's report hardly seems called for, and might indeed be deemed somewhat out of place.

Were it not that there is really no ground for any intelligent controversy as to the questions of quality and safety involved in this supply, I might be inclined to feel some gratification over the fact that this report fully sustains the views already expressed by me at various times.

As to sanitary conditions upon the watershed, opinions might differ even among experts as to the best course to pursue, or how far the board should go. For the latter it therefore becomes largely a matter of the kind of policy it chooses to follow; and in the determination of such Professor Whipple's report should prove most helpful.

As is pointed out, the problem is not one involving any question of immediate or appreciable danger, but rather of taking such action as will tend to conserve the highest degree of purity and ultimately to eliminate any debatable risk of objectionable contamination. This is an ideal toward which relatively few of our American waterworks systems have striven in the past; yet it is something which is everywhere being demanded today, and Concord citizens will be satisfied with nothing less. As the engineer points out, any body surface water located or inhabited area is liable to fecal contamination at times and for this reason sanitary experts are more and more inclining in favor of the uniform application of some variety of treatment to supplies of this character. Such is in the direction of exercising the same precaution as is instanced by the taking out of fire insurance; the fact that most of us never realize on the latter is not a deciding feature.

In the absence of purification, any policy with a view to reducing the chances of objectionable contamination to the lowest possible limit is thoroughly justifiable and to be commended. It is true that many features offer no especial danger in themselves, particularly under proper restrictions; the difficulty generally is, however, in successfully enforcing such restrictions. Thus there can be no objection to the practice of boating, so long as those concerned behave themselves; and there is no particular objection to the application on the watershed of the manure of cattle to a receptive soil, when conditions are such that this food for both terrestrial and aquatic vegetation will not be washed directly into tributary brooks.

Personally, I feel that Professor Whipple's comment with regard to chemical analysis is a very pertinent one; at the same time it may be well

to point out that in such matter we are following the standard practice, such as is regularly pursued by Massachusetts and other states in the routine examination of water supplies. While we have never regarded this supply as a troublesome one in point of odors due to organisms yet the algae feature is most interesting and will undoubtedly warrant the special study suggested.

Very truly yours,

CHAS. D. HOWARD,
Chemist State Board of Health.

JULY 21, 1914.

MERRIMACK.

Concerning this source, the chemist of the board has submitted the following report:

Samples recently submitted from the system supplying the village of Merrimack with water having shown the presence of sewage bacteria, the town was visited July 24, 1914, for the purpose of investigating the situation.

This supply is controlled by the United Realty Company, which is an organization subsidiary to the W. H. McElwain Company, the latter corporation conducting a factory for the manufacture of leather and employing the bulk of the labor in the village. During 1910 this company sunk a series of driven wells near the bank of the Souhegan River, with a view to securing a public supply system. The quality, however, was unsatisfactory and these wells had to be abandoned. Shortly afterward a system was installed involving direct pumpage from the river, the intake being at the dam, near the north bank. Subsequent examinations of water from this system have uniformly indicated the existence of sewage pollution.

At the present time there are forty-five services, supplying approximately 300 persons. Total income, at \$5 per service, \$225 annually. The water, which is pumped continuously during the day, is delivered from two wooden tanks, and in addition to the domestic use mentioned, the supply furnishes steam for the shop. For the manufacture of leather and for fire purposes, there is a separate system, consisting of water pumped from the canal. The fire system mentioned applies only to the shops; there are no hydrants and no residence fire protection other than the pressure available at the sill-cocks for ordinary lawn hose connection.

In addition to the McElwain shops, a table manufactory and a mill for the production of excelsior furnish labor to the residents. The company's representative, Mr. H. L. Clough, who is also superintendent of the water works, informs me that they have taken particular pains to instruct the takers that the water is dangerous and must not be used for drinking without boiling. It is, however, admitted that notwithstanding this warning, there is considerable carelessness in this respect, especially on the part of the foreign element.

Although it is claimed that there is no serious source of contamination of the Souhegan River for a distance of some six or seven miles above

Merrimack, yet it is common knowledge that this small stream undergoes extensive pollution at a number of points during its course, receiving as it does all of the sewage of the town of Wilton, as well as most of that of Greenville and Milford, and also undoubtedly a certain amount from Amherst and some other places. Unquestionably, use of the raw water as taken at Merrimack is attended by very grave danger, being liable as it is to give rise to an epidemic of typhoid or other serious enteric disorder at any time. The fact that such may not as yet have occurred is of course no argument whatever in favor of the innocuousness of the supply. The discharge of typhoid dejecta in connection with the sewage delivery above is by no means necessarily of continuous or even frequent occurrence; and when the latter does occur, it may be that the stream conditions at that particular time are favorable for the practical elimination of the bacilli before reaching Merrimack; and the viability of the few remaining such bacilli may be so low that the average **healthy** adult is able, with his good resistance powers, to swallow these without experiencing any ill effects. Yet in the case of children or infants, or of adults whose vitality has become reduced, a different sequel may result.

On the other hand, the necessary conditions are liable to come about at any time, giving rise to a violent epidemic. A further reason why the use of a contaminated public water supply should be condemned, and particular effort directed toward its improvement, is in the fact that such a supply is liable to "seed" the village with a few cases of "typhoid carriers"—persons very seriously liable to infect any food stuff which they may handle or come in contact with.

Allowing a minimum of 50 gallons per capita per day (it would doubtless exceed this quantity during the summer in view of extensive use on arid garden soils) and adding one third for boiler consumption at the shops, it would appear that the total daily consumption must be in the neighborhood of 20,000 gallons. The installation of a mechanical filter plant to handle this quantity would be a relatively inexpensive matter. Such a filter could easily be set up either in or near the small building at the dam. The plant should include (a) a small settling basin to permit of sedimentation for a few hours—particularly at times of rains, when the water would be abnormally turbid, (b) provision for the application of a coagulant (alum), (c) a gravity (open) filter tank (the closed or pressure variety is not to be recommended), and (d) means for the application of a dose of chlorine (or, if preferred, calcium hypochlorite) to the filtered water. A properly constructed plant of this character, properly operated, would afford a supply entirely safe (practically sterile) and the equal of spring water. After being established it would not require regular skilled attention, and in fact would require but a small amount of daily attention on the part of the shop engineer or other person assigned to the duty.

Were this a clear lake water—such as is dealt with at Laconia—it is quite probable that the chlorine sterilization alone would be sufficient. While the application of such a treatment to the river water would undoubtedly render it "safe" most of the time, yet such an arrangement in the case of a stream supply is at best to be regarded as but a temporary

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makeshift. The proper procedure necessary to produce a satisfactory supply involves a combination of the above with filtration.

As an alternative to purification, I am informed by Mr. Clough that the company may at an early date investigate the feasibility of securing a supply of pure ground water from driven wells, to be sunken on an elevation west of the village. Unfortunately, the driven well proposition is a somewhat uncertain one as to results, in point of both quality and quantity; yet many villages are now thus supplied, and such a system would undoubtedly have advantages over one based upon the application of purification to the river water.

Still another alternative to which it is intimated the company may resort involves the abandonment altogether of this utility, it being represented that any adequate improvement would represent an outlay for which there would be no corresponding compensation. It may be pointed out that such abandonment could only be effected following application to the public service commission. In view of the value of such a service to the community, it is believed, however, that some plan can be evolved to care for the financial feature involved—either through an increase in rates or public-spirited assistance on the part of individuals. In any case, however, particular emphasis should be given to the fact that continuance of the system in question in its present form cannot be indefinitely tolerated. Action of some sort should be taken immediately.

Respectfully submitted,

CHARLES D. HOWARD,
Chemist.

JULY 29, 1914.

The above report having shown that the present character of the Merrimack water supply is dangerous, the water company was directed to effect satisfactory improvement. As a result of this Mr. Robert Spurr Weston, consulting engineer, has submitted a report in which he recommends a system involving use of water from the abandoned driven wells constructed in 1910, such to be subjected to deferrization and filtration. As his tests have shown that these wells will afford sufficient water which can be satisfactorily purified in this way this plan is given preference over the alternative one of filtration of Souhegan River water, the net cost of which latter he estimates as being somewhat greater. Such plan has accordingly been adopted by the company, following its approval by the board, and the latter has received assurance that construction will be commenced upon the new system at the earliest feasible moment. The estimated cost of these improvements is slightly under \$12,000.

HENNIKER.

The following reports by the chemist bear upon the supply of the Henniker Spring Water Company, and proposed extensions thereto:

On June 16, 1913, an examination was made of the water system of the Henniker Spring Water Company. This consists (a) of two large square wells on a hillside in woodland about three fourths of a mile southwest of the village, and (b) two wells similarly situated at about the same distance northwest of the village on the other side of the river. Although cattle get into these woods, there is in neither place any chance for contamination. The wells are roofed over and one of these roofs is in a high state of decay; wells also have not been cleaned since constructed—several years ago. This might be done with advantage, although, with two or three noticeable exceptions, past analyses have indicated an excellent water.

At this date the Bay State Well Drilling Company are drilling an eight-inch well close by the present upper well on the southwest location. Had reached a depth of about 40 feet, mainly through a light, soft clay. They expect to go down as much as 200 feet and are planning to syphon from this into the well below.

The water as drawn from taps in the village is of excellent appearance, fine flavor and has a high reputation. This supply is not available for street or lawn sprinkling.

The well above referred to was continued to a depth of 359 feet (219 feet through solid granite ledge.) The result was a failure, a flow of only two gallons per minute being encountered.

During February, 1914, a second well 400 feet deep (370 feet through solid rock) was completed. The yield from this also was disappointing, being not over eleven gallons per minute as indicated by a two-days pumping test.

Meanwhile, certain citizens having become interested in the matter of the installation of a public water supply system, an examination was made November 4th of Crany Hill Pond, a source under consideration. As the appended report, dated November 11, 1913, indicates, this source was found to be scarcely suitable:

This pond, lying in a depression between two hills situated about four miles south of Henniker Village, is an oblong sheet of water of from 20 to 30 acres area. The altitude of Crany Hill is given on the map as 1,200 feet above sea level, and as that of the pond is apparently between 200 and 300 feet lower, it is evident that as a source of water supply an exceptionally high pressure would be afforded. While no definite figures are as yet at hand, it has been estimated that the difference in elevation between the pond and the village is not less than 500 feet. Under such circumstances, provided the source was acceptable, it should be possible—as has been

suggested—to advantageously utilize some of this pressure for the generation of electric current, if the volume of water should prove sufficient therefor.

From the northern end of the pond a small brook flows down to the Contoocook. The pond has no inlet, being entirely spring fed. The total area of the two water sheds (eastern and western) is roughly estimated as in the neighborhood of 200 acres. The eastern watershed is wooded. On the western one are situate three small farms, with buildings, and including some cultivated land, with pasturage at present utilized by about twenty head of stock. There is no probability of any contamination from farm drainage. Although the land for fifty rods, more or less, back from the western shore is wooded, it is apparent that horses and cattle at present roam through these woods and wade into the pond. This, however, is a matter that could be easily adjusted.

At the present time there are two fishing camps located on the shores. While it is claimed that these camps are used but very little, and it is evident that the summer cottage has not as yet become an institution at this pond, yet it seems to be the case that the latter is a favorite resort for fishing parties. According to some "records" found displayed at one of these camps, it would appear that the varieties of fish most abundant are horn-pout and pickerel.

As is well known, the habitat most favored by such fish is a grassy stream or pond with muddy bottom, and such is exactly what I found to be true of Crany Hill Pond. The shores at both the upper and lower extremities are boggy in character and are covered for a considerable area by a heavy growth of swamp grass. In fact, the whole western shore is semi-swampy in character, being doubtless underlayed by springs, of which two or three good sized ones were observed seeping out of the ground a few rods from the shore.

The pond at this side is said to be quite deep. On the eastern side, however, the slope is gradual, soundings from a boat at a distance of about 100 feet from shore and taken in the neighborhood of the protruding rocks indicating a depth at this point of but two to three feet only, with a muddy bottom. While this eastern shore is higher and cleaner than the other side, yet there is but one short stretch—some fifty feet—of clean, gravelly beach, the balance being grass-grown. It is probable, however, that a sand or gravel stratum underlies the surface at no great distance below, and that the small beach referred to represents a spot which has become denuded of its humus covering.

This dirt cover is one result of the rather abundant growth of vegetation noted. Another is manifested in the character of the water. It is inevitable that water stored in such a reservoir must—regardless of its original purity—show a considerable degree of color and dissolved vegetable matter, and carry a comparatively large amount of microscopic life, together with the attendant odors and taste—the latter liable to become more or less marked at times and especially following heavy rains.

Although water showing these characteristics in varying degrees is not uncommonly in use for domestic purposes, and is not necessarily unhealthful, yet as a general proposition a source carrying beyond a certain amount .

of color and organic matter is hardly to be regarded as potable, and its installation for public supply purposes is not to be recommended. Whether or not the character in a given case is such as to warrant non-acceptance depends somewhat upon the local restrictions as regards other available sources, also upon the standard of quality of the water supplies in the district in question. What might be considered poor in one section of the country might very likely be regarded as acceptable in some other. In New Hampshire, where we have as a rule clear and clean supplies of a low degree of color, the standard in this respect is relatively somewhat high; and where at all practicable, such standard should be maintained in any given case.

The following analyses represent samples collected as follows: No. 11730, from brook, just below emergence from pond; No. 11731, from 100 feet off eastern shore, near rocks, in three feet of water; No. 11732, from gravelly shore on eastern side. As reference has been made to the new Pembroke Pleasant Pond supply, the analysis afforded by a sample of this water is also included for purposes of comparison.

ANALYSES OF SAMPLES COLLECTED FROM CRANEY HILL POND, NOVEMBER, 1913.
(Parts in 100,000)

	11730	11731	11732	Pleasant Pond
Odor	decided hay-like, with distinct fishy or rock-weed odor, more pronounced on heating.			
Taste	Faintly fishy; more pronounced on heating.			None noted.
Color	0.40	0.35	0.40	0.05
Turbidity	v.sl	v.sl	v.sl	faint
Sediment	Sl. veg	sl. veg	sl. veg	v.sl
Total solids	3.1	3.5	3.0	3.2
Fixed solids	1.3	1.4	1.0	1.5
Free ammonia	0.0006	0.0008	0.0006	0.0010
Albuminoid do	0.0214	0.0180	0.0255	0.0110
Nitrates	0.008	0.002	0.002	0.005
Nitrites	none	none	none	none
Chlorine	0.11	0.11	0.12	0.30
Hardness (soap)	0.6	0.6	0.5	0.7
Alkalinity	0.6	0.6	0.5	....
Acidity to phenolphthalein after boiling	0.3	0.3	0.3	....
Colon bacilli (icc & iocc)	neg.	neg.	neg.	neg.
Microscopical	Many dictyospharium, also numerous pandorina			nothing notable

The above analyses indicate a very pure, soft water, so far as any drainage contamination is concerned; yet, as a whole, the results are unfavorable.

The degree of color, while higher than that of many of our New Hampshire surface supplies—much higher than some of them—is nevertheless probably not great enough to warrant, of itself alone, condemnation of this source, although any noticeable degree of color in the glass is aesthetically objectionable. In this case the color is somewhat greater than that of the Manchester supply, and, as will be noted, is very much greater than that of Pembroke's new source. On the other hand, it is not as high as that of the towns of Berlin, Goffstown, Somersworth, and the present source of the Suncook Water Company.

In other respects, however, this water departs largely from the character of Pleasant Pond, and in fact tends to approach that of the present Suncook supply, from which that town is now seeking relief. Further, at this time at least, the taste and odor are more marked than is generally true of the latter, notwithstanding that the source of the Suncook supply is much more swampy than this, and in an aesthetic sense very much more objectionable.

The proportion of nitrogenous organic matter, as indicated by the albuminoid ammonia content, is comparatively high, higher in fact than the average exhibited by any other surface supply in New Hampshire. The nearest approach to it in this respect is the emergency supply of Wilton, consisting of a pond of similar character. On the other hand, it is apparent from the very low free ammonia content that this nitrogenous matter occurs in quite a stable form and that it is not liable to undergo putrefactive changes readily. In short, aside from the fact that it is present in considerably larger amount than conforms to our standards, there is probably nothing injurious about this organic matter.

At the present time the water carries a microscopical population of objectionable character. In addition to the types more or less abundant in the average surface water, two varieties of chlorophyceae (*dictyosphaerium* and *pandorina*) were noted in considerable numbers. These tend to swim near the surface, being noticeable to the naked eye as a cloud of minute moving points, whenever the surface of the water in the sample bottle was disturbed. Here, too, the objection is based upon aesthetic grounds, in that such organisms impart a fishy or oily taste and odor to the water, such being more apparent when the latter is heated. In the case of these samples, the taste, though faint, is noticeable, while the odor of the water confined in the gallon receptacle is quite distinct.

Conditions of similar character are not infrequently met with in other surface supplies, it being entirely possible that the Pleasant Pond source cited may show something of this nature at times. Ordinarily, however, this is a fugitive condition and it is seldom that it persists indefinitely, although it has been known to give a great deal of trouble in the case of certain supplies elsewhere. Here the conditions are favorable for the propagation of such growths. Yet it would be well to make later observations regarding this feature. As has been suggested, it is possible that as a result of the recent rains, following a very dry summer, all of the abnormal conditions referred to may be in exaggerated form at the present date. However, there is not much hope, in the case of a reservoir of this character, of

any very marked degree of improvement being noted at any time. Color and dissolved vegetable matter are inherent properties of this water.

In conclusion, I regret therefore that it seems necessary to report adversely as to this source, although, as already intimated, I do not feel that a final decision would be quite warranted at this time and believe that later observations would be worth while. It may be stated, however, that the citizens of Henniker would find the change from the present source of drinking water to that under discussion a radical one.

It is very probable that clearing and stripping the shores would result in some improvement, although it would appear that the extensive degree of such necessary for radical improvement would involve a rather large expenditure. This, however, is something that cannot be definitely determined without a detailed engineering survey upon which actual estimates might be based.

Incidentally, a somewhat novel remedy occurs to me in connection with the suggested plan to utilize the excess water pressure. Provided the volume of flow should prove sufficient for the purpose, this proposition would not only prove probably cheaper than any extensive cleaning up at the pond (beyond, I mean, the commonly practiced clearing up of the shores), but it would consist in the installation at some elevated point on the pipe system of a turbine for the generation of current. From the turbine the water would be accumulated in a small artificial reservoir, from which it could be fed to a battery of two rapid filters, such, for example, as are now in use with the Lebanon supply. The effluent, thus deprived of its excess of color, vegetable matter and organisms, would compare very favorably with the present spring water supply—in fact, could be made practically as good. Filters of this variety are not expensive to install and in conjunction with a power plant could be operated very advantageously. Of course, the feasibility of the power feature could only be determined following actual measurements of the available flow from the pond; the filtration would be dependent upon this only to the extent that, requiring daily supervision, its conduct alone would involve some expense.

Later, the town entered into an agreement with the present water company and engaged the services of Mr. W. S. Johnson, consulting engineer, to see what could be done toward development of the present sources of the spring water supply as well as the securing of an addition thereto. As the following report of June 25, 1914, indicates, it was found that the spring supply could be materially increased in volume, and this, together with an auxiliary supply consisting of a large dug well, will, it is believed, solve the problem of a water supply for this village.

Some months ago the town entered into an agreement through its water supply committee with the present Henniker Spring Water Company, the arrangement being to take over the stock and property of such

company. A clause of the agreement provides that only ground water shall be supplied, thus barring out the utilization of a surface source, such, e. g., as a pond. As a matter of fact, there seems to be no satisfactory pond water economically available.

After what seems to have been a very careful and thorough investigation of the situation by Mr. William S. Johnson, engineer, the latter has recommended as a town water supply the development of the present springs system, supplemented when found necessary by water from a large well to be constructed upon a certain area. This plan is set forth in detail in the reports of the engineer and of the committee, copy of which is submitted herewith. Briefly, the plan consists (a) in materially increasing the volume of water available from the present springs system through the collection of water from one of the springs now going to waste. It is estimated that such loss is approximately equivalent to the present total supply. By suitable means all of this spring water is to be collected in a cemented reservoir of 250,000 gallons capacity, located upon a hill just below one of the spring basins and at an elevation of about 185 feet above Proctor Square. It is believed that with the improvements that will be effected the present system can thus be made to afford a quantity of water ample for all except the summer season—and by this is meant an abundance not only for general household use but for lawn and garden sprinkling, as well as for adequate fire protection.

It is planned to supplement this supply during the dry season (b) by a large dug well located in what is known as the Garland pasture at a point about a half mile southeast of the village. My examination of this tract on the date of writing shows what would seem to be an unusually favorable situation for the collection of a very large volume of pure ground or spring water. The tract in question lies between two small spring-fed brooks, the proposed location for the well being a few rods below the base of a steep bluff, the ground at this point being very springy and apparently saturated with water.

Water from this well would be pumped into the mains and thence into the reservoir by power from an oil engine. It is represented that such engines are extremely economical to operate, it being claimed that pumpage against a 200-foot head for a period of three hours each day during one hundred days would cost but approximately \$125, inclusive of fuel, labor and all other expense.

The committee have agreed to purchase sufficient land and to fence such in a manner as to properly exclude cattle from the immediate neighborhood of the well. The latter will be about 20 feet deep, the upper courses of its side-walls laid in cement, and the whole provided with a tight cover of concrete. A sample of water recently submitted to the laboratory from a test well sunken on this site gives very promising indications as to quality, although it should be stated that at the time this sample was collected conditions incident to the construction were not sufficiently settled to allow of the collection of water entirely free from earthy matter, and accordingly it is not possible at this time to report absolutely regarding all features involved in a consideration of the quality. It is the opinion,

however, based upon both the analysis and an examination of the site in question, that the water here obtained will prove of perfectly satisfactory quality.

The plans for the proposed reservoir involve construction of cement and concrete, with a concrete cover, the latter to be overlaid by about two feet of soil, thus properly preserving the quality of a supply of this character.

Because of perfect clarity and the absence at all times of color, odor and taste, a ground water supply, such as the plan here outlined contemplates, is greatly to be preferred to a surface water source, whenever such can be secured in adequate quantity. For their success in finding a means whereby the citizens can continue to enjoy water of the character referred to this water supply committee is to be congratulated.

At this date we are informed that construction is completed, and the system is a success in every way.

FOOD AND DRUG EXAMINATIONS.

REPORT ON FOOD AND DRUG EXAMINATIONS.

CHARLES D. HOWARD, *Chemist.*

Dr. Irving A. Watson,

Secretary, State Board of Health:

DEAR SIR—I beg to submit herewith a summary of the work of food, drug and liquor examinations for the biennial period ending August 31, 1914; also certain comments and recommendations bearing thereon. The details of this work will be found in the bulletins issued during the period included.

The greatly increased burdens placed upon the laboratory as a result of the operation of the Law of 1913 relative to the inspection of water supplies, also in connection with the control of the operation of installations for water disinfection, has seriously handicapped the work of food and drug examination during the past two years.

The following tabular summary indicates a total of 985 articles examined, inclusive of 886 foods and liquors and 99 drugs and medicinal preparations.

TABLE SHOWING NUMBER AND VARIETIES OF FOODS EXAMINED.

	Total Samples.	Not Conformable.
Bread	5	0
Breakfast foods	4	0
Butter	13	5
Coffee and substitutes.....	22	6
Cider	5	2
Candy	4	1
Canned fruits and vegetables.....	9	2
Cocoa and chocolate.....	5	0
Cream	48	4
Flavoring extracts	54	27
Honey	4	0
Ice cream	111	31
Jellies and jams.....	6	4
Liquors	154	44
Maple products	9	1
Milk	294	*156
Milk products	9	0
Non-alcoholic beverages	56	20

*Inclusive of 71 Standard as to composition but showing slightly too much sediment to be passable as clean milk.

	Total Samples.	Not Conformable.
Olive oil	6	1
Salad preparations	5	4
Spices	17	5
Soda water ingredients.....	13	5
Vinegar	10	4
Miscellaneous foods	38	8
	<hr/>	<hr/>
Totals	901	330

DRUG EXAMINATIONS.

	Total Samples.	Not Conformable.
Alcohol	2	0
Borax	1	1
Chlorinated lime	5	1
Camphorated oil	2	0
Formaldehyde	9	0
Fowler's Solution	6	1
Fluid extract ginger.....	1	1
Glycerin	1	1
Hydrogen peroxide	5	4
Lime water	1	1
Milk sugar	1	0
Quinine tablets	5	1
Sodium salicylate tablets.....	8	1
Spirits nitrous ether.....	5	3
Spirits camphor	3	1
Spirits anise	2	0
Miscellaneous official drugs.....	21	3
Proprietary remedies	21	9
	<hr/>	<hr/>
Totals	99	28

MILK INSPECTION.

Because of the interest manifested in the special grade known as Inspected Milk, the number of samples submitted of the ordinary market variety has not been so great as in the past. While the proportion of the inspected grade produced is still relatively small, the fact of the existence of such has served to stimulate local inspectors to give special attention to the production of a cleaner milk, with the result that the efforts of the latter have been directed more largely than in the past to bettering conditions at the dairy itself. With one conspicuous exception, the number of samples submitted to this department from cities and towns unprovided with laboratory equipment for

milk examination has been comparatively small. It needs to be realized that while the dairy inspection is highly essential, the laboratory examination, as constituting the final proof of results achieved, should not be neglected.

As has been previously pointed out,* the establishment of a special grade of milk is of value to the people of the state at large only in so far as such may serve as a stimulus to the improvement of the milk supply of the average consumer. The latter will necessarily continue to be the object toward which the bulk of our efforts should be directed.

The following table, with summary, shows the results in detail of examination of milk as submitted from the various towns. These results are not inclusive of those for Inspected Milk. While it may appear from the table showing summary of results of food examinations in general that the proportion of non-conformable milk samples was unduly large, it should be noted that the figure given is inclusive of a considerable number of samples which were objectionable only in that, although not exactly "dirty," they showed too large a proportion of sediment to be passable as "clean."

*Bulletin, April, 1914, p. 55.

No.	TOWN.	Solids %	Fat %	REMARKS.
6356	Amherst*	9.90	2.4	Watered. Produced by C. L. Smith.
6357	Amherst*	9.87	2.4	Watered. Produced by C. L. Smith.
6358	Amherst*	11.23	3.2	Watered. Produced by C. L. Smith.
6650	Amherst	14.62	5.6	Bacteria 4200. Clean.
6614	Antrim*	10.58	2.0	Skimmed. Collected of W. C. Hills.
7023	Antrim*	11.50	2.5	Skimmed. Collected of W. C. Hills.
6684	Berlin	....	3.2	Sample very sour when received.
6330	Barnstead*	12.47	3.2	Slightly dirty.
6331	Barnstead*	12.17	3.2	Clean.
6332	Barnstead	14.39	3.8	Slightly dirty.
6333	Barnstead*	13.37	4.0	Slightly dirty.
6369	Canaan	12.09	3.8	Clean.
7145	Canaan	15.30	5.8	Dirty.
6644	Claremont	13.43	3.8	Bacteria 4800. Clean.
6276	Claremont	12.80	4.0	Clean.
6346	Claremont	13.32	4.2	Bacteria over 500,000. Dirty.
6348	Concord	12.15	3.8	Bacteria 17,000. Clean.
6648	Concord	12.37	4.0	Bacteria 1300. Clean.
6651	Concord	13.60	4.5	Bacteria 5800. Clean.
6652	Concord	13.21	4.1	Bacteria 10,200. Clean.
6653	Concord	13.80	4.7	Bacteria 15,900. Clean.
6437	Concord	....	...	No preservatives.
7027	Concord*	11.24	3.1	Below standard.
7037	Concord*	11.48	3.7	Below standard. No added water.
7038	Concord*	11.28	3.2	Below standard. No added water.
7030	Concord*	11.39	3.0	Below standard.
7031	Concord*	11.56	3.4	Below standard.
7035	Conway	12.70	4.0	Clean.
7036	Conway	11.40	3.0	Below standard. Slightly dirty.
6353	Deering*	11.93	3.4	Below standard. Dirty.
6354	Deering*	11.86	3.8	Below standard. Dirty.
6355	Deering*	10.48	3.6	Watered. Dirty.
6643	Derry*	13.64	4.6	Bacteria 5900. Clean.
6345	Derry*	13.99	3.8	Bacteria 15,000. No sediment but stains filter-pad.
6641	Dover	13.41	3.8	Bacteria 400. Clean.
7146	Dover	12.40	3.4	Clean.
7078	Franklin	13.21	4.0	Slightly dirty (Clark).

*Same producer or dealer.

No.	TOWN.	Solids %	Fat %	REMARKS.
7079	Franklin	15.09	5.6	Clean (Webster).
7080	Franklin	12.23	3.5	Slightly dirty (Kimball).
7081	Franklin	13.24	3.8	Clean (Mickey).
7082	Franklin	12.16	3.2	Slightly dirty (Kelley).
7083	Franklin	15.39	5.8	Slightly dirty (Osgood).
7084	Franklin	15.31	5.6	Clean (Webster).
7085	Franklin	13.64	4.6	Clean (Thompson).
7086	Franklin	14.83	5.2	Clean (Rayon).
7095	Franklin	13.28	4.3	Clean (Stevens).
7096	Franklin	12.77	4.1	Slightly dirty (Kelley).
7097	Franklin	14.65	5.4	Clean (Gruby).
6283	Durham	12.08	3.8	Very sour when received.
6605	Durham	13.79	4.0	Very dirty.
6606	Durham	13.01	3.8	Slightly dirty.
6607	Durham	12.88	3.6	Slightly dirty.
6608	Durham	13.29	4.1	Slightly dirty.
6609	Durham	16.10	5.8	Slightly dirty.
6450	Franconia	12.36	3.6	Slightly dirty. Numerous spores.
6451	Franconia	13.32	4.2	Slightly dirty. Increased leucocytes.
6452	Franconia	12.67	3.6	Slightly dirty.
6453	Franconia	12.42	3.4	Slightly dirty.
6314	Gorham	14.10	4.6	Slightly dirty.
6352	Goshen	15.55	5.8	Some very fine sediment.
6656	Goffstown	12.95	3.7	Bacteria 33,000. Clean.
6657	Hanover	14.98	5.5	Bacteria 1100. Clean.
6662	Hampton Falls	15.16	5.7	Bacteria 7700. Clean.
6269	Hopkinton*	12.32	3.6	No added water.
6270	Hopkinton*	13.69	4.0	No added water.
7063	Hopkinton	12.49	3.7	
7064	Hopkinton	12.45	3.8	
6654	Hopkinton	12.42	3.5	Bacteria 28,700. Clean.
6659	Hopkinton	15.68	5.6	Bacteria 14,200. Clean.
6379	Henniker	12.81	3.6	Clean.
	Hudson	12.24	4.3	Slightly dirty.
6641	Keene	13.37	4.0	Bacteria 59,400. Clean.
6520	Keene	13.44	4.0	Clean.
6378	Keene	14.35	4.4	Clean.
7029	Keene	12.67	4.5	Clean.
6398	Laconia	12.84	3.8	Clean.
	Laconia	13.13	4.4	Clean. Bacteria 20,500.
6264	Littleton	15.00	5.5	Clean.
6272	Manchester†	9.98	2.8	Watered (submitted by dealer).
6273	Manchester	9.68	2.4	Watered (submitted by dealer).
6274	Manchester	10.19	2.8	Watered (submitted by dealer).
6275	Manchester	10.06	2.8	Watered (submitted by dealer).
6288	Manchester (Bedford)	11.13	3.2	Watered (G. W. Boynton).
6289	Manchester (Bedford)	10.14	3.0	Watered (G. W. Boynton).
6290	Manchester (Bedford)	10.83	3.2	Watered (G. W. Boynton).
6291	Manchester (Bedford)	10.63	3.0	Watered (G. W. Boynton).
6463	Manchester (Auburn)	11.14	3.7	Watered (Henry Rivers).
6464	Manchester (Auburn)	11.27	3.7	Watered (Henry Rivers).
6465	Manchester (Auburn)	11.36	3.7	Watered (Henry Rivers).
6466	Manchester (Auburn)	11.36	3.6	Watered (Henry Rivers).
6523	Manchester (Bedford)	10.75	3.0	Watered (J. A. Labrecque).
6524	Manchester (Bedford)	10.43	3.0	Watered (J. A. Labrecque).
6525	Manchester (Bedford)	9.51	2.8	Watered (J. A. Labrecque).
6526	Manchester (Bedford)	9.54	2.8	Watered (J. A. Labrecque).
6527	Manchester (Bedford)	8.99	2.8	Watered (J. A. Labrecque).
6528	Manchester (Bedford)	6.57	2.0	Watered (J. A. Labrecque).
6529	Manchester (Bedford)	8.51	1.6	Watered (Carroll McQuesten).
6530	Manchester (Bedford)	6.63	2.0	Watered (Carroll McQuesten).
6532	Manchester (Auburn)	11.61	3.8	Watered (collected of dealer).
6533	Manchester (Auburn)	11.40	3.8	Watered (collected of dealer).
6572	Manchester	9.44	2.6	Watered (collected of dealer).
6573	Manchester	10.25	2.8	Watered (collected of dealer).
6574	Manchester	10.62	3.0	Watered (collected of dealer).
6575	Manchester	10.69	3.0	Watered (collected of dealer).
6587	Manchester (Auburn)	11.38	3.6	Watered (Henry Rivers).
6588	Manchester (Auburn)	11.29	3.8	Watered (Henry Rivers).
6589	Manchester (Auburn)	10.61	3.2	Watered (Henry Rivers).
6598	Manchester	10.45	3.5	Watered (S. Kozatek).
6599	Manchester	9.96	3.3	Watered (S. Kozatek).
6655	Manchester	13.40	4.6	Bacteria 5100. Clean.
7154	Manchester (Loudon)	8.49	2.8	Watered.°

*Same producer or dealer.

†The Manchester samples for the most part represent special cases of adulteration in which the local inspector acted as an agent of the State Board of Health.

°Investigation showed employee of non-resident owner responsible. Employee discharged.

No.	TOWN.	Solids %	Fat %	REMARKS.
7155	Manchester (Loudon)	8.53	2.9	Watered. ^o
6658	Merrimack	13.20	4.2	Bacteria 3700. Clean.
6347	Newport	14.10	4.6	Bacteria 9000. Clean.
6637	Northumberland	12.07	3.0	Slightly dirty. Odor.
6242	Nashua	12.34	3.6	Clean.
6292	Nashua†	13.30	4.4	Slightly dirty. Hudson producer.
6293	Nashua†	13.06	4.0	Slightly dirty. Hudson producer.
6294	Nashua†	12.09	3.8	Dirty. Hudson producer.
6295	Nashua†	13.30	4.4	Slightly dirty. Windham producer.
6296	Nashua†	12.10	3.2	Slightly dirty. Hollis producer.
6297	Nashua†	9.13	2.8	Watered. Very dirty.
6298	Nashua†	....	14.0	Top milk. Slightly dirty. Merrimack producer.
6299	Nashua†	12.88	4.2	Dirty.
6300	Nashua†	11.32	3.8	Very dirty. Below standard.
6301	Nashua†	11.42	3.4	Slightly dirty. Below standard.
6302	Nashua†	11.82	3.8	Slightly dirty. Below standard.
6303	Nashua†	11.10	3.2	Dirty. Below standard.
6304	Nashua†	11.67	3.4	Slightly dirty. Below standard. Hollis producer.
6305	Nashua†	11.96	3.4	Dirty. Below standard.
6306	Nashua†	11.93	3.6	Slightly dirty.
6340	Nashua	15.02	5.4	Clean.
6362	Nashua	12.93	3.8	Clean. A few streptococci.
6365	Nashua	....	3.2	Slightly dirty.
6604	Nashua	14.12	5.4	Clean. Bacteria 7640.
6422	Pembroke	....	...	No preservatives.
6646	Peterboro	14.16	5.1	Bacteria 4500. Clean.
6645	Peterboro	14.13	4.4	Bacteria 3800. Clean.
6660	Peterboro	14.64	4.7	Bacteria 165,000.
	Peterboro	12.20	3.6	Clean.
	Peterboro	12.72	4.0	Slightly dirty.
	Peterboro	13.31	4.3	Slightly dirty.
	Peterboro	11.92	3.5	Clean. Below standard.
	Peterboro	15.20	5.8	Dirty.
	Peterboro	13.15	4.5	Very dirty.
6626	Peterboro*	11.05	1.5	Skimmed. Normal microscopically.
6636	Peterboro*	14.55	5.0	Clean. Bacteria 1500. Normal microscopically.
6629	Peterboro*	12.61	3.8	Clean. Bacteria 3800. Normal microscopically.
6631	Peterboro*	....	5.0	Clean. Normal microscopically.
6649	Portsmouth	14.34	6.0	Clean. Bacteria 1200.
7026	Portsmouth	9.32	0.8	Skimmed. Many hay bacilli.
	Portsmouth	12.70	4.2	Clean. Bacteria 3600.
	Portsmouth	12.08	4.0	Clean. Bacteria 7200.
	Portsmouth	12.06	3.8	Clean. Bacteria 4600.
5470	Rochester	14.60	5.8	Bacteria 350,000.
5517	Rochester	15.88	...	Disagreeable odor.
6317	Somersworth	13.28	4.0	Slightly dirty.
6315	Somersworth	10.50	3.2	Watered. Dirty.
6316	Somersworth	13.56	4.2	Slightly dirty (Boucher\$).
6318	Somersworth	13.31	4.2	Slightly dirty (Wentworth).
6319	Somersworth	14.03	4.8	Clean (Coffin).
6320	Somersworth	12.36	4.0	Slightly dirty (Lauzon).
6321	Somersworth	12.08	3.6	Clean (Billings).
6322	Somersworth	11.84	3.4	Clean. Below standard (Hodgdon).
6323	Somersworth	14.55	4.6	Clean (Paradis).
6324	Somersworth	13.33	3.8	Clean (Clement).
6325	Somersworth	12.82	3.8	Clean (Johnson).
6326	Somersworth	13.05	4.2	Clean (Files).
		11.10	3.0	Slightly dirty. Below standard (Turgeon).
6327	Somersworth	12.82	3.8	Slightly dirty (Vachon).
6328	Somersworth	11.35	3.2	Clean. Below standard (Lapointe).
6329	Somersworth	12.57	3.8	Slightly dirty (Drolet).
6468	Somersworth	12.68	4.0	Clean (Ricker).
6469	Somersworth	12.73	4.0	Slightly dirty (Lauzon).
6470	Somersworth	13.26	4.4	Slightly dirty (Boucher).
6471	Somersworth	11.94	3.6	Clean. Below standard (Turgeon).
6472	Somersworth	13.76	4.2	Clean (Hopkins).

^oInvestigation showed employee of non-resident owner responsible. Employee discharged.

†Submitted by consumers representing Nashaway Woman's Club.

*Same producer or dealer.

§This and the names following mainly represent the dealers of whom samples were taken. The supply of some of these dealers is from a number of different producers.

STATE BOARD OF HEALTH.

No.	TOWN.	Solids %	Fat %	REMARKS.
6473	Somersworth	13.19	4.2	Clean (Drolet).
6474	Somersworth	13.77	4.2	Clean (Vachon).
6475	Somersworth	13.48	4.4	Clean (Hodgdon).
		11.51	3.0	Slightly dirty. Below standard (Vigueau).
6476	Somersworth			Clean (Paradis).
6477	Somersworth	14.22	4.6	Clean (Lapointe).
6478	Somersworth	12.77	4.0	Dirty (Ricker).
6479	Somersworth	12.72	4.0	Clean (Johnson).
6480	Somersworth	15.04	5.6	Clean (Boucher).
6481	Somersworth	12.64	4.2	Clean (Files).
6482	Somersworth	14.73	4.6	Clean (Coffin).
6483	Somersworth	13.40	4.4	Slightly dirty (Clement).
6535	Somersworth	12.72	3.6	Dirty (Vegeux).
6536	Somersworth	13.83	4.8	Clean (Hodgdon).
6537	Somersworth	13.84	5.0	Clean. Low fat (Paradis).
6538	Somersworth	13.04	3.0	Slightly dirty (Johnston).
6539	Somersworth	13.83	4.7	Slightly dirty (Coffin).
6540	Somersworth	12.06	3.0	Very dirty (Ricker).
6541	Somersworth	13.21	3.4	Dirty (Drolet).
6542	Somersworth	13.59	4.0	Clean (Files).
6543	Somersworth	12.69	3.2	Slightly dirty (Vachon).
6544	Somersworth	12.76	3.4	Dirty (Boucher).
6545	Somersworth	13.18	3.8	Dirty (Hannigan).
6546	Somersworth	13.79	4.0	Dirty (Turgeon).
6547	Somersworth	12.27	3.0	Clean (Clement).
6548	Somersworth	12.37	3.4	Slightly dirty (Lauzon).
6549	Somersworth	13.97	4.2	Clean (Wentworth).
6550	Somersworth	14.22	5.2	Clean (Billings).
6551	Somersworth	12.47	3.4	Slightly dirty (Haggetty).
6552	Somersworth	14.58	4.8	Slightly dirty (Lapointe).
6615	Somersworth	12.74	3.2	Slightly dirty (Boucher).
6616	Somersworth	13.68	4.6	Slightly dirty. No added water (Lanzon).
		12.05	4.0	
6617	Somersworth			Slightly dirty (Wentworth).
6618	Somersworth	13.63	4.4	Slightly dirty (Vachon).
6619	Somersworth	13.29	4.2	Slightly dirty (Lapointe).
6620	Somersworth	12.64	3.8	Clean (Paradis).
6621	Somersworth	13.61	4.4	Clean (Ricker).
6622	Somersworth	12.03	3.2	Clean (Drolet).
6623	Somersworth	13.66	4.6	Clean (Hodgdon).
6624	Somersworth	12.65	3.9	Clean (Canute Farm).
6625	Somersworth	12.80	4.2	Very dirty. Below standard (Vegeux).
6626	Somersworth	11.81	3.4	Dirty (Turgeon).
6627	Somersworth	13.10	4.4	Slightly dirty (Johnson).
6628	Somersworth	12.82	3.8	Slightly dirty (Coffin).
6629	Somersworth	14.90	5.0	Clean (Clement).
6630	Somersworth	12.97	4.0	Clean (Files).
7051	Somersworth	14.85	5.0	Clean (Vachon).
7052	Somersworth	13.36	3.8	Clean (Charet).
7053	Somersworth	13.21	4.0	Clean (Johnston).
7054	Somersworth	12.35	3.6	Dirty (Paradis).
7055	Somersworth	13.63	4.6	Slightly dirty (Tibbetts).
7056	Somersworth	12.09	3.6	Clean. Below standard (Turgeon).
7045	Somersworth	11.89	3.2	Filthy (Coffin).
7046	Somersworth	13.29	4.2	Clean (Emery).
7047	Somersworth	12.46	3.2	Slightly dirty (Clement).
7048	Somersworth	12.63	3.6	Slightly dirty (Files).
7049	Somersworth	13.43	4.0	Slightly dirty (Drolet).
7050	Somersworth	13.81	4.2	Slightly dirty (Canute Farm).
7057	Somersworth	13.43	4.0	Slightly dirty (Vegeux).
7058	Somersworth	13.47	4.0	Clean (Hodgdon).
7059	Somersworth	12.70	3.4	Dirty (Lapointe).
7060	Somersworth	13.35	4.2	Dirty (Gregorokes).
7061	Somersworth	12.54	3.0	Slightly dirty (Emery).
7153	Somersworth	12.43	3.0	Clean (St. Peter). Microscopically normal.
		13.28	4.4	
7103	Somersworth			Clean (Charet).
7104	Somersworth	14.23	4.6	Clean (Dronin).
7105	Somersworth	14.86	5.0	Slightly dirty. Below standard (Bemis).
7106	Somersworth	11.37	3.0	Clean (Tramble).
7107	Somersworth	13.33	4.4	Clean. Below standard (Hannigan).
7108	Somersworth	11.76	3.0	Dirty (Haggetty).
7109	Somersworth	12.31	3.8	Dirty (Lobisonier).
7110	Somersworth	13.24	4.2	Dirty (Burstaris).
7111	Somersworth	13.64	4.4	Slightly dirty (Rouloud).
		14.73	4.8	

No.	TOWN.	Solids %	Fat %	REMARKS.
7112	Somersworth	12.71	4.0	Dirty (Desmaris).
7113	Somersworth	12.33	4.0	Dirty (Vegeaux).
7114	Somersworth	13.27	4.4	Clean (Morrison).
7115	Somersworth	12.87	4.1	Dirty (Lapointe).
7116	Somersworth	11.90	3.6	Clean. Below standard (Turgeon).
7117	Somersworth	11.57	3.4	Slightly dirty. Below standard (Lauzon).
7118	Somersworth	12.62	4.0	Dirty (Gregorokes).
7119	Somersworth	12.39	3.8	Clean (Drolet).
7120	Somersworth	11.33	3.2	Slightly dirty. Below standard. (Thibeault).
7121	Somersworth	12.60	4.0	Slightly dirty (Canute Farm).
7122	Somersworth	14.61	5.4	Clean (Hodgdon).
7123	Somersworth	13.26	4.4	Clean (Emery).
7124	Somersworth	11.93	3.7	Clean. Below standard (Clement).
7125	Somersworth	12.56	3.8	Clean (Files).
7126	Somersworth	12.18	3.6	Slightly dirty (Tibbetts).
7127	Somersworth	13.58	4.4	Clean (Vachon).
7128	Somersworth	13.19	4.0	Clean (Paradis).
7129	Somersworth	12.48	3.7	Clean (Johnston).
7130	Somersworth	13.13	4.2	Slightly dirty (Coffin).
7131	Somersworth	13.60	4.4	Very dirty (Horne).
6691	Seabrook	13.69	4.5	Slightly dirty (Tucker).
6692	Seabrook	12.53	4.1	Dirty (Chase).
6693	Seabrook	12.26	4.0	Slightly dirty (Gore).
6694	Seabrook	13.66	4.4	Dirty (Knowles).
6695	Seabrook	13.91	4.8	Slightly dirty (Blatchford).
6696	Seabrook	13.91	5.0	Dirty (Evans).
7067	Seabrook	13.26	4.2	Slightly dirty (Perkins).
7068	Seabrook	12.45	4.0	Slightly dirty (Perkins).
7069	Seabrook	13.34	4.2	Slightly dirty (Perkins).
7070	Seabrook	12.72	4.1	Clean (Perkins).
7071	Seabrook	13.28	4.2	Clean (Perkins).
7072	Seabrook	12.68	3.4	Slightly dirty (Perkins).
7073	Seabrook	14.67	5.2	Slightly dirty (Perkins).
7074	Seabrook	11.16	3.0	Slightly dirty. Below standard (Perkins).
7075	Seabrook	12.00	3.6	Slightly dirty (Perkins).
7076	Seabrook	12.78	3.8	Slightly dirty (Perkins).
6384	Stewartstown	13.57	3.8	Very dirty (collected of Mohawk Dairy Co.)
6385	Stewartstown	12.65	3.4	Very dirty. Sold as "guaranteed pure pasteurized milk."
6386	Stewartstown	12.86	3.6	Clean (Harvey).
7156	Sunapee	11.46	2.1	Very dirty. Skimmed ("as supplied at hotel").
6373	Walpole	14.56	4.2	Some blood and increased leucocytes.
6467	Wakefield (Union)...	14.05	5.0	Clean. Increased leucocytes.
6681	Wilton	12.78	3.8	Dirty. Barn-like odor.
6383	Whitefield	13.35	4.2	Clean.

Total samples examined.....	294.
Acceptable (clean and legal composition).....	112, equivalent to 38%
Slightly below standard but clean.....	13, equivalent to 4%
Slightly dirty	80, equivalent to 27%
Dirty	31, equivalent to 10%
Very dirty	11, equivalent to 3%
Below standard as drawn.....	28, equivalent to 9%
Skimmed	5, equivalent to 2%
Watered	38 (11 producers) 3%

PROSECUTIONS.

Seven complaints have been filed by the chemist for the sale of milk containing added water. Five of these—all in Hillsborough County—resulted in fines of from twenty-five to fifty dollars, inclusive

of one jail sentence of sixty days, suspended. The two remaining complaints were both against a Rockingham County producer, representing second and third offenses, respectively. In no one of the three instances involved has this office been able to secure definite information as to any action that may have been taken. It has been, however, learned that the party in question has gone out of the business of milk production.

Two complaints for the sale of sub-standard ice cream, and five in connection with beverages which were improperly labeled or adulterated with saccharin, all resulted in convictions and the imposition of fines. It is not believed that any artificial sweetener is being knowingly used at the present time by any New Hampshire bottler. The cases in question were all in connection with sales by transients.

INSPECTION OF LIQUORS.

Special discussion of this subject appeared in the Bulletin for July-October, 1914, page 66. Under the law of 1903, the Laboratory of Hygiene is required to examine and report to the commission concerning the grade of liquor on sale as indicated by samples submitted by its agents. In determining such quality, the Commission holds that it must be guided by the definitions as laid down in the special law referred to rather than by the less obsolete and more practical provisions of the food and drug law. If anything of value is to be accomplished under the present system of regulating the quality of liquors, it is indispensable that this feature of the law be revised. It is apparent that in its present form and as applied to present conditions it is not enforceable.

Of the 156 samples examined, forty-four were found to be either improperly labeled or not in accord with accepted standards. A large proportion of the samples were drawn from bulk, being sold as "whiskey," without any distinguishing qualification. Under the present definition of the latter beverage, it would be impossible—contrary to what has been urged—to exclude from sale the compounded varieties and confine the term to the aged-in-the-wood type altogether. The former are not necessarily "impure," as is so frequently alleged. It is all a matter of type—i. e. of proper labeling—of getting what one pays for. Consequently, the main point to be determined, aside from alcoholic content, is whether or not the

vendor is properly representing the character of the goods he sells. The accepted standard calls for an alcoholic content of not less than 40 per cent (80 proof). In quite a number of instances where the strength has fallen below this, the inspectors have noted that the labeling of the cask denoted a reduced proof. Unless, therefore, the dealer specifically notifies the purchaser concerning such reduced strength—an improbable circumstance—the fraud perpetrated upon the latter differs in no degree from what it would be were the vendor to add the water himself. This form of adulteration is very common and there should be some means of checking it. It may be pointed out that a large share of the profit attaching to the manufacture and sale of distilled liquors is based upon the more or less liberal use of water—a state of affairs which only the rigid enforcement of a standard of alcoholic strength will serve to cure.

ABOLITION OF USE OF SERIAL NUMBER.

Following the action of the federal department, it was recommended that the provision for the use of a serial number and its publication upon the label in connection with New Hampshire guaranties be discontinued. There can be no question that the previous use of the guaranty statement has proved extensively misleading.

NET WEIGHT LAW.

An amendment of the food and drug law, adopted by the legislature of 1913 and identical in language with a federal amendment, provides that on and after November 21, 1914, all food in package form shall bear a statement upon the label as to the net weight, measure, or numerical count of the contents.

In this connection reference may be made to a bill which was defeated at the last session but which will doubtless come up again in 1915, such bill providing not only for state supervision of sales by weight or measure of all commodities but also for the periodical supervision and checking up of all weighing and measuring appliances. Laws of this character are now very generally in force in other states, and there can be no serious question as to the needs in this respect in New Hampshire.

It may be pointed out that in the administration of such laws due recognition should be given to the fact that in so far as they

apply to foods and drugs a close relation exists between such and the operation of the food and drug law. Reference has already been made to the fact that under the food law an article is misbranded if it bears no statement, or an incorrect statement, concerning its weight or measure. Not only is the determination of the actual weight or measure logically the first step in connection with the general examination of food, but also in connection with the matter of a proper weight allowance, or tolerance, a certain amount of chemical investigation is not infrequently essential. Any system which provided for a duplication of such sampling or examinations would obviously represent an extravagance as well as an unnecessary encroachment upon this department.

For this reason a not uncommon arrangement in other states involves placing the enforcement of both laws under one administrative head. However, a measure of the character under discussion necessarily deals with so many other commodities than foods and drugs, and involves so many considerations foreign to the work of a health department, that the wisdom of such a course is at least open to question. Certainly such an arrangement should not be effected unless adequate provision was made for a deputy who should give his whole time to the matter.

SALE OF COLD-STORED FOODS.

At present there is but one commercial cold storage plant within the state. Consequently the adoption of the more or less elaborate regulations for the conduct of the cold storage business, as now in force in quite a number of other states, is uncalled for here. At the same time a very large quantity of cold stored articles of food are annually shipped to and sold in this state, and there can be no question that some special regulation governing the sale of such articles would be helpful in protecting the consumer from fraud or injury. The principal application of such a law—a bill for which was defeated at the last session—would be in connection with the sale of eggs and poultry. It is notorious that not a little fraud is practiced in the sale of both articles. Unquestionably the sale of poultry in a state of partial decomposition is annually responsible for numerous cases of enteric disorders. It is true that, under the general food law, a decomposed article of food is to be deemed as adulterated. Nevertheless a special statute covering this point, particularly one which would specifically

provide for action in connection with the seizure and final disposition of unwholesome provisions, should be helpful.

To cite an example, founded upon actual occurrences: Even though it may appear reasonably certain that a given lot of provisions is responsible for the sudden development of diarrhoeal attacks among the patrons of a restaurant or hotel, the average inspector with due regard for property rights will hesitate some time before proceeding to confiscate or to prohibit the use of the provisions in question. Very frequently the results of a casual examination may be indeterminate, and to withhold from use pending a laboratory examination might involve no inconsiderable loss or embarrassment to the owner. Yet there is good reason for believing that every year there is sold to New Hampshire consumers thousands of pounds of provisions which should instead have been either buried or burned, or sent to a rendering or fertilizer plant.

CLEAN ADVERTISING.

After clean food and honest medicines, one of the greatest needs attaching to the production and sale of these commodities is their clean and honest advertising. The state of affairs regarding adulteration and misbranding of foods and drugs as existent twenty years ago was no worse—if as bad—than it is today, relative to the practice of openly and deliberately publishing false representations concerning the value of commodities.

This conspiracy on the part of the manufacturer and the publisher to deceive the consumer has its best known exemplification in connection with the sale of patent medicines and so-called “medicinal” foods; yet the practice of course extends in some degree to every form of commodity. It is in fact merely one of those “trade practices” left over from the time when all sorts of fraud and misrepresentation in connection with the manufacture and sale of food and medicines were held up as justifiable on the ground of business expediency.

The better class of publishers, however, realizing that something needs to be done, particularly to secure release from the thralldom of a certain type of advertisers, are themselves taking steps with a view to procuring an abatement of the evil. Under Canadian law, thanks largely to their efforts, false advertising is now a misdemeanor. The Canadian statute provides that:

"Every person who knowingly publishes, or causes to be published, any advertisement for either directly or indirectly promoting the sale or disposal of any real or personal movable or immovable property or interest therein, containing any false statement which is of a character likely to or is intended to enhance the price or value of such property or any interest therein, or to promote the sale or disposal thereof, shall be liable upon summary conviction to a fine not exceeding two hundred dollars, or to six months' imprisonment, or to both fine and imprisonment."

Each year also sees the number of state false advertising laws increased. Bills to this effect have already been introduced in New Hampshire, but thus far they have failed of passage.

DEPARTMENT NEEDS.

Reference has been made elsewhere to the handicap which other forms of inspection must experience as a result of the increasing demands in connection with the control of water supplies. A great deal more work could be done, and should be done, along the lines of food and drug inspection. To keep pace with what even the average amongst the progressive states are accomplishing in this respect would demand materially increased facilities. In order to accomplish more than a mere superficial discontinuous attack upon the problem, the employment is demanded of at least one inspector who should devote his whole time to the routine side of food and drug inspection, together with an additional assistant chemist to handle the increased volume of material thus accruing. Under a former arrangement a sum up to one thousand dollars derived from liquor license fees was available for this purpose, in recognition of the requirement regarding the examination of liquors for the state license commission. This sum, however, is no longer available.

Under the present situation the chemist finds himself obliged to devote an unduly large proportion of his time to office work, correspondence, and matters of clerical detail. It would appear that the laboratory, inclusive of both divisions, is a department of sufficient size and importance to warrant the regular employment of a clerical assistant. To render the best service it would be essential that such person be regularly attached to the laboratory in order to acquire the necessary familiarity with the technical character of the work involved. Obviously, for the scientific worker to be obliged to give any considerable share of his time and effort to such matters is not good economy; nor can he, on personal grounds, well afford to spend his time in this manner.

ORDERS AND SPECIAL REPORTS.

REGULATIONS PROMULGATED BY THE STATE BOARD
OF HEALTH FOR THE PROTECTION OF
CERTAIN WATER SUPPLIES.

JACKSON.

Under the date given, the following petition was presented to the State Board of Health by the Board of Health of the town of Jackson:

JACKSON, N. H., November 25, 1912.

*To the State Board of Health,
Concord, N. H.:*

GENTLEMEN—Your petitioners, the Board of Health of the town of Jackson, N. H., have reason to believe that Rocky Branch Brook, so-called, which is the source of water supply for a part of the town of Jackson, is in danger of pollution, and that the local regulations are not sufficient to prevent such threatened contamination; therefore, we hereby petition the State Board of Health to investigate the situation and to establish such regulations as you may deem necessary to protect the said water supply against any pollution that in your judgment would endanger the public health.

Respectfully submitted,

[Signed]

A. C. HARRIMAN,

F. H. WILSON,

Board of Health, Jackson, N. H.

An inspector from the State Board of Health visited the locality and found that some logging camps had been built near the stream from which the water supply of Jackson was taken, and that only a mile and a half, or two miles, from the point where the water enters the service pipe. The situation was found to be such as to endanger the purity of the water of that stream.

The state inspector, in conjunction with the Board of Health of the town of Jackson, made certain recommendations for the discharge of the drainage from the camps to a point which, in their judgment, would not endanger the water supply, which advice the proprietor agreed to carry out to the letter, under the supervision of the local board of health.

The State Board of Health, however, deemed it best to establish regulations under the provisions of the public statutes, which was done at a regular meeting of the board held on December 7, 1912, as follows:

REGULATIONS OF THE STATE BOARD OF HEALTH FOR THE PROTECTION OF THE PURITY
OF THE WATER OF ROCKY BRANCH BROOK IN THE TOWN OF JACKSON.

1. No privy, and no pigpen, stable, or other building or structure in which horses, cattle, swine or fowls are kept, or a cesspool, shall be built or maintained within one hundred feet of the usual channel of Rocky Branch Brook above the intake of the water supply of Jackson, or of any of its tributaries, except in such cases as the local board of health may permit, upon approval of the State Board of Health.

2. No sewage of any kind, sink-water, or water that has been used in washing or cleansing either materials, person or food, shall be allowed to run into said stream, its tributaries, or into any excavation or cesspool in the ground, or on to the surface of the ground, within one hundred feet of the usual channel of said stream or tributaries, except by consent of, and under such conditions and regulations as may be made by the local Board of Health, with the approval of the State Board of Health.

3. No privy, cesspool or place of deposit upon the surface of the ground for sewage, sink-water, or water used for cleansing person or material shall be allowed to exist where it may be reached by high water in the event that the said stream or its tributaries overflow their usual channels, or where rain or melting snow would be likely to wash said material into said stream or its tributaries.

4. No dead animal, or parts thereof, or any article perishable or decayable, and no manure, waste or garbage shall be deposited so near said stream or its tributaries as to endanger the purity of the water.

5. No sawdust, shavings, or other waste from mills or manufactories shall be deposited in said stream or its tributaries, or upon their banks so near the same as to be reached by high water, or to be washed into said streams in any way.

6. None of these things, materials or conditions mentioned in the foregoing regulations, or anything else that might endanger the purity of the said water supply, shall be permitted to exist, whatever may be their distance from the said stream or its tributaries, in such locality or manner as, in the opinion of the board of health, would be liable to contaminate the water of the said stream or its tributaries.

7. No person shall bathe or wash clothing, or in any way or manner defile or contaminate the water of said Rocky Branch Brook above the intake above mentioned.

8. It shall be the duty of the board of health to enforce these regulations.

9. The Public Statutes provide for a fine for violations of regulations established by the State Board of Health for the protection of public water supplies.

BOSCAWEN.

The Board of Health and the Board of Water Commissioners of the town of Boscawen, in view of the fact that there are some cottages, and others being erected, in close proximity to Walker's Pond,

from which the water supply of Boscawen is taken, petitioned the State Board of Health to establish regulations for the better protection of that source of supply. Following is the petition:

BOSCAWEN, N. H., May 18, 1914.

*To the State Board of Health,
Concord, N. H.:*

GENTLEMEN—We, the subscribers, who constitute the Board of Health of the town of Boscawen, and we, the subscribers, who constitute the Board of Water Commissioners of the Boscawen Water Precinct, represent that the water of Walker's Pond, so called, located in the towns of Boscawen and Webster, which is a source of public water supply, is contaminated or in danger of contamination, and that the local regulations are not sufficient to protect the said pond from pollution.

We, therefore, do hereby petition, under the provisions of Chapter 57, Laws of 1899, the State Board of Health to establish such rules and regulations as may be necessary to protect this supply against any pollution that might, in the judgment of the board, be dangerous to public health.

Respectfully submitted,

[Signed]

A. ALEXANDER,
E. E. GRAVES,
WILLIS G. BUXTON,

Board of Health of Boscawen, N. H.

ELI E. GRAVES,
ALMON G. NORRIS,
F. L. GERRISH,

Board of Water Commissioners of Boscawen, N. H.

A topographical examination of the water-shed of Walker's Pond showed that certain regulations were necessary and that the above mentioned boards were justified in asking the State Board of Health to establish regulations under the provisions of the Public Statutes, which was done at a regular meeting of the board held on July 9, 1912, as follows:

REGULATIONS OF THE STATE BOARD OF HEALTH FOR THE PROTECTION OF THE PURITY
OF THE WATER OF WALKER POND, IN THE TOWNS OF BOSCAWEN AND WEBSTER.

1. No privy, pig-pen, stable, or other building or structure in which horses, cattle, swine, or other animals or fowls are kept, shall be built, continued, or maintained within seventy-five feet of Walker Pond (meaning high water mark), or within seventy-five feet of any bay, cove, or inlet thereto, or within seventy-five feet of any stream tributary to said pond, bays, coves or inlets, except in such cases as the local Board of Health may permit, upon the approval of the State Board of Health, and under such regulations as they may require.

2. No sink-water, urine, or water that has bene used for washing or cleansing either materials, person or food, shall be allowed to run into said pond, or into any bay, cove, or inlet thereof, or into any stream tributary thereto, or into any excavation or cesspool in the ground or on the surface of any ground within seventy-five feet of said pond (meaning high water mark), or of any bay, cove, or inlet, or within seventy-five feet of any stream tributary thereto, except by consent, and under such regulations and conditions as may be given by the local Board of Health, upon approval of the State Board of Health.

3. No dead animal, or fish, or parts thereof, or food, or any article perishable or decayable, and no dung, either human or animal, kitchen waste, swill, or garbage shall be thrown into or deposited in said pond, or left or permitted to remain within seventy-five feet thereof (meaning high water mark), or into any bay, cove, or inlet of said pond, or into any stream tributary thereto, or within seventy-five feet of such bay, cove, or inlet, stream or tributary.

4. No sawdust shall be thrown or be allowed to fall into said pond, or into any stream tributary thereto.

5. No person shall bathe in said pond.

6. No matter, waste, or materials such as are described in sections 2, 3, and 4 shall be thrown, deposited, or allowed to remain upon the ice of the waters of said pond, or upon that of any bay, cove, or inlet thereof, or of any stream tributary thereto.

7. It is the duty of the local Board of Health to enforce the above regulations, and any person violating any regulation established by the State Board of Health shall be punished by a fine of twenty dollars (\$20.00) for each offence. Any deviations from the above rules must be by written consent of the State Board of Health.

DOVER.

The following petition was received from the board of health of the city of Dover:

DOVER, N. H., July 30, 1913.

*State Board of Health,
Concord, N. H.:*

GENTLEMEN—We, the undersigned, members of the Board of Health of the City of Dover, N. H., believing our water supply (known as Willands Pond) is in danger of contamination, hereby petition your honorable body to establish rules and regulations for the protection of said supply.

Respectfully submitted,

[Signed]

ANDREW KILLOREN,
E. L. CHAPMAN, M. D.,
H. K. REYNOLDS,

Board of Health, Dover, N. H.

Willand's Pond is one of the sources of water supply for the city of Dover, and is located partly in the city of Somersworth and partly in Dover.

There were certain conditions surrounding this pond that should not be allowed in connection with a public water supply. An investigation revealed the fact that better protection was absolutely necessary to safeguard the public health interests of the community. The following regulations were therefore established by the State Board of Health at a regular meeting held on October 19, 1913:

REGULATIONS OF THE STATE BOARD OF HEALTH FOR THE PROTECTION OF THE PURITY OF THE WATER OF WILLAND POND IN THE CITIES OF DOVER AND SOMERSWORTH.

1. No person shall bathe or swim in Willand Pond.
2. No person shall expectorate upon the ground within the limits of Central Park, so called. The management of said park shall provide suitable receptacles for the deposit of refuse, such receptacles to be of such character and to be cared for in a manner approved by the local board of health.
3. No food, refuse, garbage, urine, manure, dead animal or fish or parts thereof, wash-water, or waste of any description, shall be thrown into or deposited in said pond or inlet, or be deposited or permitted to remain upon the surface of the ground within two hundred feet thereof.
4. No privy or cesspool, and no pigpen, stable or other building or structure in which horses, cattle, swine or other animals or fowls are kept, shall be built or maintained within two hundred feet of said pond or inlet, except in such cases as the local board of health may permit, upon approval of the State Board of Health.
5. No domestic animals or fowls shall be permitted to enter the water of said pond or inlet, or to frequent the shores within a distance of one hundred feet therefrom.
6. It is the duty of the local board of health to enforce the above regulations, and any person violating any regulation established by the State Board of Health is liable to a fine of twenty dollars (\$20.00) for each offence.
7. All of the foregoing regulations will take effect and be in force on and after October 1, 1913. Any deviations from the above rules must be by recommendation of the local Board of Health, and with the written consent of the State Board of Health.

DUBLIN.

Monadnock Lake, in the town of Dublin, is not only the source of water supply for a few individual estates, but it is also one of the great attractions of that somewhat famous summer resort towns.

The board of health of Dublin, desiring to maintain the shores of the lake and its waters in their normal purity, petitioned the State Board of Health as follows:

DUBLIN, N. H., July 30, 1914.

*To the State Board of Health,
Concord, N. H.:*

GENTLEMEN—We, the subscribers, who constitute the Board of Health of the town of Dublin, respectfully represent that the water in Monadnock Lake, so called, in the town of Dublin, is, in our opinion, in danger of contamination, and in our opinion the local regulations are not sufficient to protect the said lake from pollution.

We therefore hereby petition your board, under the provisions of chapter 75, Laws of 1899, to establish such rules and regulations as may in the judgment of your board be necessary to protect the waters of the said lake from pollution that might be dangerous to public health.

Respectfully submitted,

[Signed]

CLIFFORD GOWING,
WILLARD H. PIERCE,
CLESSON E. GOWING,

Board of Health of Dublin, N. H.

A state inspector, in company with the local board of health, visited the shores of the lake, but found no source of contamination that presented any immediate danger. Nevertheless it was thought best to comply with the petition of the local board of health. The following regulations were promulgated at a regular meeting of the board held on July 9, 1914:

REGULATIONS OF THE STATE BOARD OF HEALTH FOR THE PROTECTION OF THE PURITY
OF THE WATER OF MONADNOCK LAKE IN THE TOWN OF DUBLIN.

ARTICLE I. No privy, pigpen, stable or other building or structure in which horses, cattle, swine or other animals or fowls are kept shall be built, continued, or maintained within seventy-five feet of Monadnock Lake (meaning high water mark), or within seventy-five feet of any bay, cove, or inlet thereto, or within seventy-five feet of any stream tributary to said lake, bays, coves or inlets, except in such cases as the local Board of Health may permit, upon the approval of the State Board of Health, and under such regulations as they may require.

ART. 2. No sink-water, urine or water that has been used for washing or cleansing either materials, person, or food, shall be allowed to run into said lake, or into any bay, cove or inlet thereof, or into any stream tributary thereto, or into any excavation or cesspool in the ground or on the surface of any ground within seventy-five feet of said lake (meaning high water mark), or of any bay, cove, or inlet, or within seventy-five feet of any stream tributary thereto, except by consent, and under such regulations and conditions as may be given by the local Board of Health, upon approval of the State Board of Health.

ART. 3. No dead animal, or fish, or parts thereof, or food, or any article perishable or decayable, and no dung, either human or animal, kitchen waste, swill, or garbage shall be thrown into or deposited in said lake, or left or per-

mitted to remain within seventy-five feet thereof (meaning high water mark), or into any bay, cove, or inlet of said lake, or into any stream tributary thereto, or within seventy-five feet of such bay, cove, or inlet, stream or tributary.

ART. 4. None of the structures or conditions described in Articles 1, 2, or 3 shall be permitted, even though beyond the minimum limit of seventy-five feet, if thereby the purity of the water is endangered.

ART. 5. No cesspool, privy, stable or place of deposit of sewage of any kind, or for disposing of sink-water, shall hereafter be erected, constructed, built, selected or allowed within two hundred (200) feet of high water mark of said lake or its tributaries without first obtaining the approval of the local Board of Health.

ART. 6. No sawdust shall be thrown or be allowed to fall into said lake, or into any stream tributary thereto.

ART. 7. No person shall bathe in said lake.

ART. 8. No matter, waste, or materials such as are described in sections 2, 3, and 4 shall be thrown, deposited, or allowed to remain upon ice of the waters of said lake, or upon that of any bay, cove, or inlet thereof, or of any stream tributary thereto.

ART. 9. Any deviations from the above rules must be by written consent of the State Board of Health.

DERRY.

Beaver Lake, in the town of Derry, has become a summer resort for a few citizens, who desire to maintain the purity of that body of water; hence they petitioned the State Board of Health as follows:

To the State Board of Health:

We, the undersigned citizens of the town of Derry, State of New Hampshire, having reason to believe that the water in Beaver Lake in said Derry, the same being public water, is being contaminated, and that the local regulations are not sufficient or effective to prevent such pollution, respectfully petition the State Board of Health for the state of New Hampshire to investigate the case, and to establish such regulations as the said board may deem necessary for the protection of the said water supply against any pollution that in its judgment would endanger the public health.

Dated at Derry, this eighth day of June, 1914.

[Signed]

JAMES P. COMEAU,
JAMES C. WILLIS,
GEORGE C. CLARKE,
DELIA LICHTENSTEIN,
IRA A. REYNOLDS,
ERNEST L. REYNOLDS,
E. L. DAVIS,
GEORGE W. BENSON,
MRS. F. W. TINKER,
ED. OSBORNE.

An examination of the locality showed that some protective action was called for inasmuch as the water was being used for domestic purposes and there existed certain sources of pollution that might greatly endanger the purity of the water. The following regulations were therefore promulgated by the board:

REGULATIONS OF THE STATE BOARD OF HEALTH FOR THE PROTECTION OF THE PURITY
OF THE WATER OF BEAVER LAKE, IN THE TOWN OF DERRY.

1. No sewage of any kind, sink-water, or water that has been used in washing or cleansing either materials, person or food, shall be allowed to run into Beaver Lake, in the town of Derry, or into any stream tributary thereto. All excavations made for cesspools for sewage shall be so located or constructed that their contents will not in any manner pollute the said lake or its tributaries.

2. No privy, pigpen, cesspool or place of deposit upon the surface of the ground for sewage, sink-water, or water used for cleansing person or material shall be allowed to exist where it may be reached by high water in the event that the said lake or its tributaries overflow their usual channels, or where rain or melting snow would be likely to wash said material into said lake or its tributaries.

3. No dead animal, or parts thereof, or any article perishable or decayable, and no sewage, waste or garbage shall be deposited so near said lake or its tributaries as to endanger the purity of the water.

4. None of these things, materials or conditions mentioned in the foregoing regulations, or anything else that might endanger the purity of the said water or ice supply, shall be permitted to exist in such locality or manner as, in the opinion of the Board of Health, would be liable to contaminate the water or ice of the said lake or its tributaries.

5. It shall be the duty of the Board of Health to enforce these regulations, which shall take effect and be in force on and after August 1, 1914.

INFANTILE PARALYSIS AND CEREBROSPINAL
MENINGITIS.

In October, 1913, the State Board of Health added infantile paralysis and cerebrospinal meningitis to the diseases required to be reported to local boards of health and by the latter to the state board. The following order was mailed to all the physicians and local boards of health in the state:

THE STATE OF NEW HAMPSHIRE.

STATE BOARD OF HEALTH.

INFANTILE PARALYSIS (POLIOMYELITIS) AND CEREBROSPINAL MENINGITIS.

Notification Required.

The State Board of Health declares each of the diseases of Infantile Paralysis (Poliomyelitis) and Cerebrospinal Meningitis, in the language of chap-

ter 16, section 2, of the Laws of 1901, to be a "malignant communicable disease," and also in the language of chapter 110, section 3, of the Public Statutes, to be a "malignant, pestilential disease." Therefore, it is required under the law that both of these diseases shall be reported by the attending physician or the householder to the local board of health, that the premises may be placarded and proper restrictions against the spread of the disease enforced.

IRVING A. WATSON,
Secretary.

A copy of the following suggestions relating to the sanitary management of infantile paralysis was also sent to all physicians and local boards of health.

THE STATE OF NEW HAMPSHIRE.
STATE BOARD OF HEALTH.

INFANTILE PARALYSIS (POLIOMYELITIS).

SUGGESTIONS FOR SANITARY MANAGEMENT OF THE DISEASE.

1. The local board of health, upon receiving notice of a case of infantile paralysis should immediately placard* the house, and should maintain a limited quarantine during the acute stage of the disease.
2. The patient should be isolated as completely as possible in a proper room, which should be clean, well lighted and ventilated, and free from all unnecessary furnishings. It should be screened to keep out insects, as it has been shown that the disease may be communicated, in animal experimentation, by the stable fly. Only those persons who are required to care for the patient should be admitted to the sick-room.
3. The nurses and persons in attendance should be instructed to thoroughly disinfect all discharges, including sputum and nasal secretions, and special care should be taken that all cups, spoons and other articles that come in contact with the patient are sterilized with boiling water or other proper disinfectants.
4. The quarantine should be a limited one. It is not necessary to restrict adults from pursuing their usual occupations in cases where they are not brought in contact with children—like teachers, for instance; but no child from a family in which there is a case of the disease should be allowed to attend any school for at least four weeks after the onset of a case.
5. Such other sanitary precautions should be taken as the local board of health deem essential in the individual case. It is not considered necessary to close schools; but when a case develops in a schoolroom, the room should be disinfected immediately.
6. On the death or recovery of the patient from the acute stage of the disease, the apartment occupied by him should be disinfected. Public funerals should not be allowed.

Infantile Paralysis (*Poliomyelitis*) is not a contagious disease like measles or scarlet fever, for instance. This is evidenced in the fact that only rarely do two cases occur in the same family. The appearance of a case should not create any public alarm.

*Placards are furnished by the State Board of Health.

That this disease is of an infectious character has been well demonstrated, but the manner of its transmission is obscure. It is considered necessary, therefore, by the highest sanitary authorities to take all reasonable precautions for its restriction, even though it cannot be demonstrated that all of such measures are absolutely necessary.

Information regarding the management of cases of cerebrospinal meningitis, the same being an abridgment of information published by the U. S. Public Health Service, was printed in the Quarterly Bulletin of the State Board of Health and distributed to all physicians and local boards of health in the state. The latter were informed of the action of the state board in a communication as follows:

THE STATE OF NEW HAMPSHIRE.

STATE BOARD OF HEALTH.

SECRETARY'S OFFICE, STATE HOUSE,
CONCORD, N. H., November 4, 1913.

To the Board of Health:

Gentlemen—Inclosed is a copy of a notice sent to every physician in this state requiring Infantile Paralysis and Cerebrospinal Meningitis to be reported to the local board of health.

Local boards of health must report all such cases to the State Board of Health upon the regular weekly report card furnished by this board for the reporting of certain communicable diseases, including Infantile Paralysis and Cerebrospinal Meningitis.

The suggestions of this board for the sanitary management of Infantile Paralysis, with the limited quarantine imposed, we believe to be sufficient for the restriction of the disease.

Suggestions for the care of Cerebrospinal Meningitis will be found in the forthcoming issue of the Quarterly Bulletin of the State Board of Health, which will be mailed very soon.

You will note the placards for the diseases required to be reported are furnished by this board upon application.

The attention of local boards of health is called to the fact that weekly reports are required during the prevalence of these diseases. Some boards are negligent in this respect.

We are also inclosing for the use of your board a copy of the principal Public Health laws of New Hampshire.

Very truly yours,

IRVING A. WATSON,
Secretary.

Inclosures.

REGULATION NO. 2, RELATING TO THE COMMON DRINKING CUP.

At a meeting of the State Board of Health on April 15, 1913, the following was adopted:

WHEREAS, An order issued by the State Board of Health under the provisions of chapter 2, Laws of 1911, and made effective July 1, 1912, prohibiting the use of the common drinking-cup on railway trains, in railway stations, in public and private schools and at the state educational institutions, has demonstrated the practicability of doing away with a practice dangerous to public health, and

WHEREAS, Continued observation and investigation have proven beyond question that the common drinking-cup may convey disease of a most serious character, therefore, in the interests of public health, it is further

ORDERED, That on and after July 1, 1913, the use of the common drinking-cup is hereby prohibited in any public park, street or way, and in any building or premises used as a public institution, hotel, theatre, or public hall; provided that this regulation shall not be held to preclude the use of drinking-cups, glasses, or other vessels, that are thoroughly cleansed by washing in boiling water after each individual use; nor shall it be held to preclude the use of sanitary devices for individual use only.

Per order of the board,

IRVING A. WATSON,
Secretary.

AN ACT entitled "An Act to restrict the Use of Common Drinking Cups."

Be it enacted by the Senate and House of Representatives in General Court convened:

SECTION 1. In order to prevent the spread of communicable diseases the State Board of Health is hereby authorized to prohibit in such public places, vehicles, or buildings as it may designate the providing of a common drinking cup and the board may establish rules and regulations for this purpose.

SECT. 2. Whoever violates the provisions of this act, or any rule or regulation of the State Board of Health made under authority hereof, shall be deemed guilty of a misdemeanor and be liable to a fine not exceeding twenty-five dollars for each offense.

SECT. 3. All acts and parts of acts inconsistent herewith are hereby repealed.

SECT. 4. This act shall take effect on its passage.

Chapter 2, Laws of 1911.

The action of the State Board of Health in this matter was transmitted to every local board with the following letter:

THE STATE OF NEW HAMPSHIRE.

STATE BOARD OF HEALTH.

SECRETARY'S OFFICE, STATE HOUSE,

CONCORD, N. H., May 21, 1913.

To Local Boards of Health:

Enclosed herewith is a copy of Regulation No. 2, relating to the Common Drinking Cup, which will go into effect on July 1, 1913.

You will note that the regulation is, in addition to regulations existing at the time of its promulgation, and that local boards of health are directed to enforce it in the same manner that they do other health regulations, in accordance with Section 2, Chapter 108, of the Public Statutes.

We suggest that your board notify, immediately, the proper authorities or persons having charge of public parks, streets, public institutions, hotels, theatres and public halls concerning the requirements of this Regulation No. 2.

Bubbling drinking faucets can be very cheaply installed, or the individual paper cup may be provided, if preferred.

We desire, also, to request the co-operation of local boards of health in the enforcement of Chapter 15, Laws of 1911, relating to the Sanitary Production and Distribution of Food, copy of which is herewith enclosed. Your attention is called particularly to Section 2 of this act, and in the event you have knowledge of conditions contrary to the provisions of this act, we would request that you notify the offending party to comply with the law, and in the event of non-compliance after a reasonable time, that you report the case to this board.

We are also enclosing a copy of the principal Public Health Laws of New Hampshire for the convenience of your board.

Will you have the kindness to fill out the enclosed blank, giving the name and postoffice address of the present members of your board?

Thanking you for the courtesy, I remain,

Very truly yours,

IRVING A. WATSON,
Secretary.

REPORTING OCCUPATIONAL DISEASES.

AN ACT to Require the Reporting of Certain Occupational Diseases, and to Provide for Its Enforcement (Chapter 118, Laws of 1913).

SECTION 1. Every physician in this state attending on or called in to visit a patient whom he believes to be suffering from poisoning from lead, phosphorus, arsenic, brass, wood-alcohol, mercury or their compounds, or from anthrax, or from compressed-air illness, or any other ailment or disease, contracted as a result of the nature of the patient's employment, shall within forty-eight hours from the time of first attending such patient send to the State Board of Health a report stating:

(a) Name, address and occupation of patient. (b) Name, address and business of employer. (c) Nature of disease. (d) Such other information as may be reasonably required by the State Board of Health. The reports herein required shall be on or in conformity with the standard schedule blanks hereinafter provided for. The posting of the report, within the time required, in a stamped envelope addressed to the office of the State Board of Health, shall be a compliance with this section.

SECT. 3. *Reports not Evidence.* Reports made under this act shall not be evidence of the facts therein stated in any action arising out of the disease therein reported.

SECT. 4. *Penalty.* Any physician who neglects or refuses to send the report or reports as herein required shall be liable to the state for a penalty of five dollars for each offense, recoverable by civil action by the State Board of Health.

Immediately following the passage of the act the secretary of the State Board of Health transmitted to every physician in the state and to the hospitals blanks for returns, the following of which is a copy. Upon the reverse side of the blank was printed a copy of the law and instructions for filling out the blank.

STATE BOARD OF HEALTH OF NEW HAMPSHIRE

CERTIFICATE OF INDUSTRIAL DISEASE.

Name of Patient.....
Address: Street and No.....City or Village.....

PERSONAL AND STATISTICAL PARTICULARS.

Sex.....Age.....Color.....Country of birth.....
Single, married, widowed or divorced (*write the word*).....
Occupation (a) Present trade, profession or work.....
.....
Particular kind of work in such trade, etc.....
.....
Date of entering present occupation.....
Employer's name
Address
Business (kind of goods made or work done).....
.....

(b) Previous occupations:

Name of occupation	Entered (year)	Left (year)
.....
.....
.....

Previous illnesses, if any, due to occupation:

Disease or illness	Year
.....
.....
.....

MEDICAL CERTIFICATE OF DISEASE.

Diagnosis of present illness.....
Chief symptoms and conditions.....
.....
.....
.....

Date first symptoms appeared.....
Complicating Diseases (such as alcoholism, syphilis, tuberculosis, etc.).....
.....
.....
.....
.....
Additional facts
.....
.....
.....
Date of diagnosis....., 191....
(Signed) M. D.
....., 191.... (Address).....

Mail to State Board of Health, Concord, N. H.

Write Plainly with Ink—This is a Permanent Record.

N. B.—Every item of information should be carefully supplied The exact statement of OCCUPATION is very important. Physicians should state DIAGNOSIS in plain terms. See instructions on back of certificate.

INSTRUCTIONS FOR FILLING OUT CERTIFICATE.

IN GENERAL.—The *medical certificate* on the right hand side the physician alone can furnish. The *personal and statistical particulars* on the left-hand side must be secured by the physician either from the patient, or, in fatal cases, from the family precisely as for similar information in certificates of death sent to boards of health.

PRESENT OCCUPATION.—*Precise* statement of occupation is very important so that the relative healthfulness of various pursuits may be known. It is necessary to know both general trade or profession (for example, *printer* or *brass worker*) and also the particular kind of work or branch of the trade (as *hand compositor* or *linotype operator* for a printer,*or *polisher* or *buffer* for a brass worker).

Date of entering present occupation is important to determine how long the worker may have been exposed to the hazard before contracting the disease.

Employer's name, address and business are necessary to ascertain distribution of occupational diseases by industries, many trades (*e. g.*, machinist's) being common to different industries.

PREVIOUS OCCUPATIONS need to be known, if possible, because present illness may be due to a former rather than present occupation, and industrial disease is frequently a cause of change of occupation. Give simply the name of each distinct occupation which the patient may have followed, with the year he entered and and the year he left.

PREVIOUS ILLNESSES.—This refers either to previous attacks of present disease, or to any other disease, *due to occupation*. All that is required is the name of each such disease or illness with the year in which it occurred. Such

information, when it can be secured, will show whether the case reported is the first attack or not, and when combined with statement of previous occupations, will afford an outline history of the patient as to occupational disease.

MEDICAL CERTIFICATE.—Only the last two items specified for this require any explanation. In making these reports it is necessary to consider the possible influence of factors other than occupation as causes of the disease. For this reason any *complicating diseases* should be noted, such, for example, as alcoholism or syphilis in connection with arteriosclerosis in cases of lead or other metal poisoning. The possible effect of other factors, such as poor hygienic conditions in the home, or other personal conditions, must be considered, and when discoverable should be noted under *additional facts*.

IRVING A. WATSON, M. D.,
Secretary.

Blanks and instructions were transmitted with a letter as follows:

THE STATE OF NEW HAMPSHIRE.
STATE BOARD OF HEALTH.

SECRETARY'S OFFICE, STATE HOUSE,
CONCORD, N. H., October 29, 1913.

Dear Doctor:

The Legislature of 1913 enacted a law requiring "Occupational Diseases" to be reported to the State Board of Health. We are, therefore, inclosing blanks for that purpose, in accordance with the provisions of the law.

Upon the reverse side of the blank will be found extracts from the law and specific directions for making the returns.

When a person develops a disease from the work in which he is engaged, it is termed an "occupational disease." As an illustration: Lead poisoning in a painter would be an occupational disease; while lead poisoning from drinking water received through a lead pipe would not be classed under that head.

The purpose of the law is to make a study of industrial conditions that may affect the health of those who are engaged in the work. It will be noticed that the facts reported under this law cannot be used as evidence in any action arising out of the disease reported.

Additional blanks will be furnished upon request.

Very truly yours,

IRVING A. WATSON,
Secretary.

INCINERATOR FOR THE CITY OF DOVER.

The city of Dover has recently had constructed an incinerator for the destruction of garbage, which we are informed is entirely satisfactory in its operation. Its relative small cost combined with its efficiency would seem to commend it to the consideration of other

cities in the state not already provided with satisfactory means of disposing of refuse.

Complete plans and specifications of this incinerator are on file in the office of the State Board of Health. Two half-tone illustrations of the structure are herewith shown.

Mr. H. K. Reynolds, health officer of the city of Dover, writes as follows:

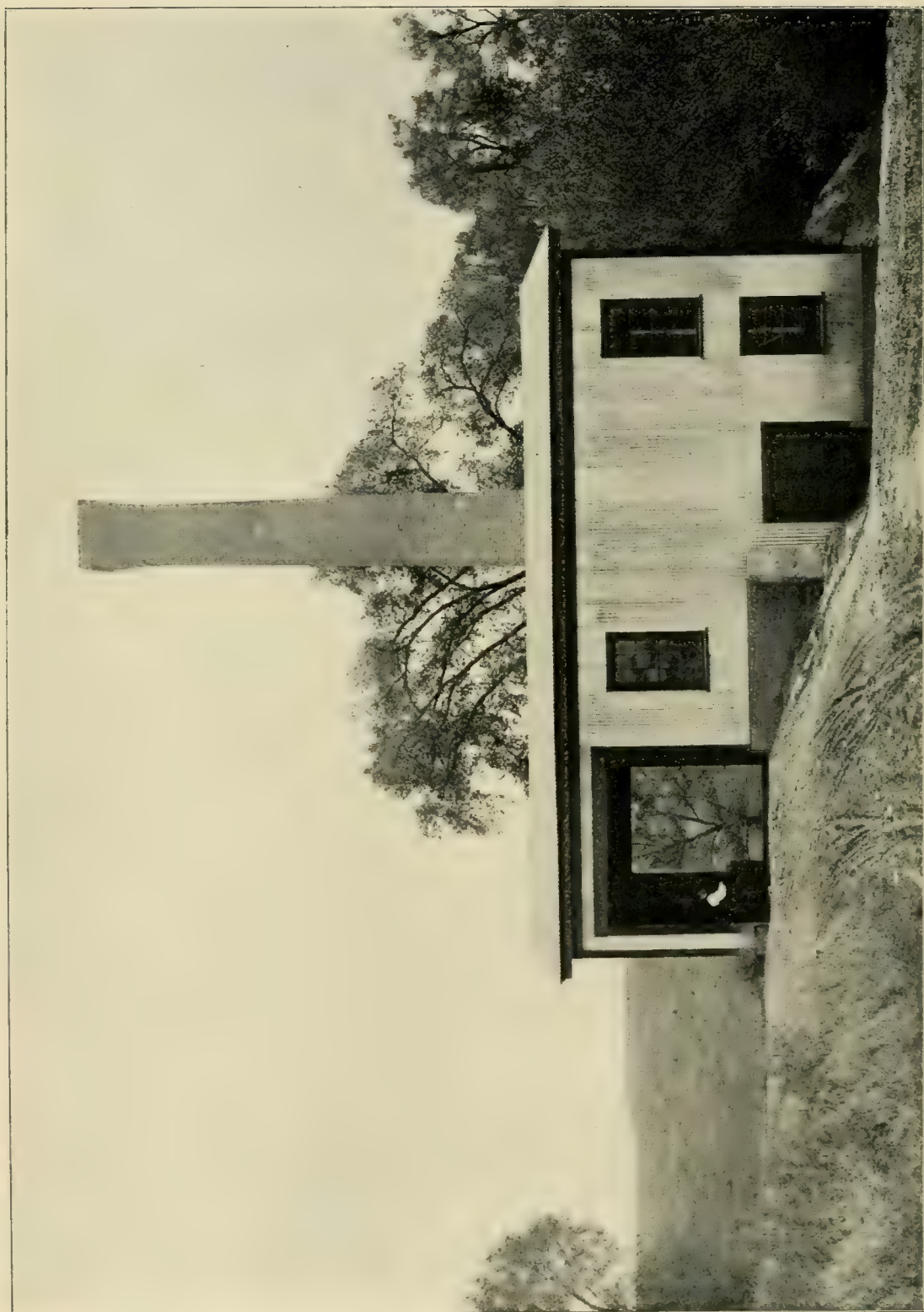
By the establishment of its municipal incinerator during the past summer, the city of Dover is the first among New Hampshire cities and towns to recognize the necessity of providing a sanitary means for the disposal of its municipal refuse. The city dumps had been a nuisance for a considerable time, on account of their unsightly condition, and the much more serious objection to their being continued was the constant fire menace, which had caused some alarm to the city authorities on several occasions.

The desirability of an incinerating plant was recognized some years ago by the city officials, but it was supposed that a plant suitable for this city would be very expensive, both in first cost and in maintenance. Recent development of a new type of municipal incinerator brought out in Massachusetts three years ago by the Jarvis Engineering Company, and especially brought to the attention of the Dover authorities by the building of a plant for the town of Sanford, Maine, in 1912, placed on the market a very effective incinerator, which exactly meets the requirements of the smaller municipalities and is very inexpensive, both as to first cost and in operation.

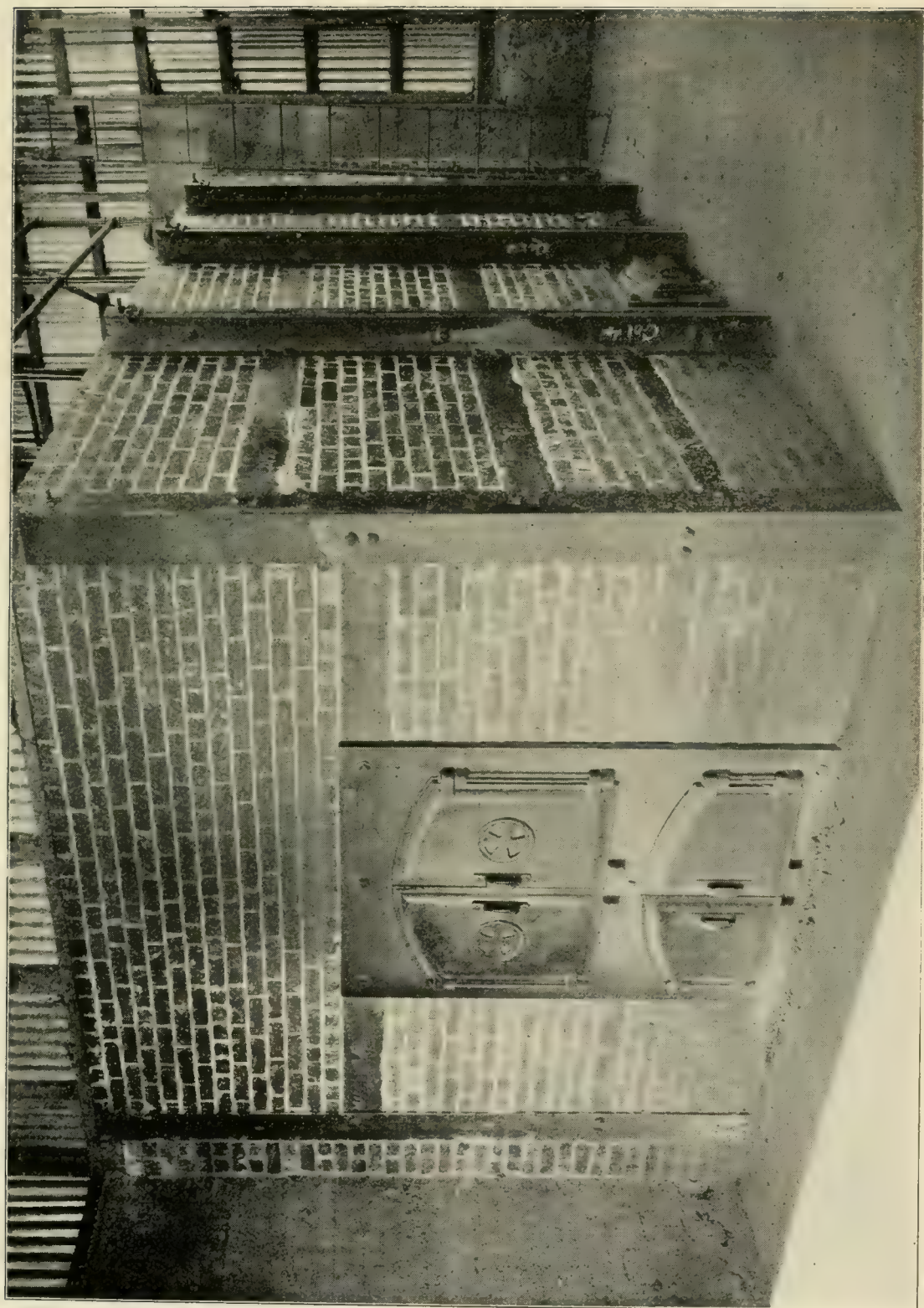
The total cost of the installation at Dover, covering the building, substantial brick chimney and Jarvis-Morse Destructor Furnace, was \$3,590. The foundations and floors are of concrete; the building, 29' x 42', is of corrugated galvanized iron, sides and roof on a substantial wood frame. The chimney is of brick, 24" square inside by 60' high. A location for the building was found, where but little grading needed to be done to arrange for convenient access to both the upper and lower floor level.

The Destructor Furnace is about 18' long, 8' wide and 8' high. It is built of highly refractory fire brick throughout, heavily reinforced with red brick and structural steel bracing. There are a series of combustion and mixing chambers, whereby the temperature of the furnace is raised to a very high point, 1,500 to 1,800 degrees, and the gases and smoke thoroughly consumed before passing to the chimney. The furnace is fed through a top charging hole, 24" in diameter, opening directly into the main combustion chamber. This arrangement is of the greatest convenience. Material is brought in wagons, dumped on the floor and introduced directly into the furnace through the charging hole. For the introduction of large boxes, crates, barrels, etc., large fire doors are placed at the front end of the furnace.

It was guaranteed by its builders to destroy 1,200 lbs. per hour of mixed combustible refuse and garbage. During tests made by the city authorities, the furnace has developed a much greater capacity than was guaranteed. All kinds of combustible refuse, wet and dry, have been put into the furnace in



THE DOVER INCINERATOR.



THE DOVER INCINERATOR (Interior View.)

large quantities and satisfactorily consumed. Waste paper, boxes, garbage, store and market refuse, dead animals, etc., are all put into the incinerator.

There are no mechanical attachments or devices, such as forced draft blowers, to be operated in connection with the furnace. It requires the attention of one fireman when in operation. No additional fuel is required, so that the cost of operation is merely the expense of one fireman.

It has proved true in this city, as we understand has been the case in other places which have established municipal incinerators of this type, that there has been a tendency on the part of storekeepers and housholders to send refuse to the plant for destruction, instead of allowing it to accumulate around the premises. This is, of course, very desirable, as so many of our fires are caused by accumulation of waste material.

We wish to say that the incinerator has been entirely satisfactory, not only to the officials, but to the people in general.

INSPECTED MILK.

The legislature of 1911 enacted a measure providing for "Certified Milk" and "Inspected Milk," under certain conditions to be established by the State Board of Health. Following is a copy of the act:

AN ACT to provide for Certified and Inspected Milk.

Be it enacted by the Senate and House of Representatives in General Court convened:

SECTION 1. For the purpose of improving the dairy interests of the state of New Hampshire and for the better protection of public health, the State Board of Health may establish rules and regulations, under which may be produced and sold a grade of milk known as certified milk, and also a grade of milk known as inspected milk.

SECT. 2. No person shall exchange, or offer or expose for sale or exchange as and for certified milk or as and for inspected milk, any milk which does not conform to the regulations prescribed by the State Board of Health for each grade, or by a commission appointed by a county medical society, with the approval of the State Board of Health.

SECT. 3. All milk sold as certified milk or as inspected milk shall be conspicuously marked or labeled in accordance with the regulations of the State Board of Health, as provided in section 2, and must be produced from healthy, tuberculin-tested animals; must be free from antiseptics, added preservatives, pathogenic germs, and bacteria in excess of the established regulations.

SECT. 4. Any person who violates any of the provisions of this act, or the regulations established under it, shall be liable to a fine not exceeding ten dollars for each offense.

Approved April 6, 1911.

Nearly two years passed after the enactment of law without any more being made to operate under its provisions. It was evident that an effort would have to be made to interest dairymen in its advantages else it would remain a dead letter. Therefore, early in 1913, the State Board of Health in coöperation with the dairy department of the State Board of Health in coöperation with the dairy department of the New Hampshire State College and local milk inspectors conceived the idea of inaugurating a movement to secure the production of "inspected milk." The New Hampshire Sanitary Milk Association was organized, with the choice of Prof. Fred Rasmussen, dairyman, New Hampshire Agricultural Experiment Station, as president, and Mr. Carl O. Seaman, milk inspector of Manchester, as secretary.

This association sent the following communication to the State Board of Health:

NEW HAMPSHIRE SANITARY MILK ASSOCIATION.

MANCHESTER, N. H., March 3, 1913.

*Irving A. Watson, M. D.,
Secretary State Board of Health,
Concord, N. H.:*

DEAR SIR—A sub-committee of the New Hampshire Sanitary Milk Association begs leave to submit the following outline of regulations for the production and sale of a high grade of milk:

The purpose of establishing a grade of milk known as "Inspected Milk" is to place before the medical profession and the consuming public a clean, wholesome milk, produced under conditions satisfactory to the State Board of Health.

Inspected Milk is milk drawn from healthy, tuberculin-tested cows in clean surroundings, free from antiseptics, added preservatives, pathogenic germs and bacteria not in excess of 100,000 per cubic centimeter.

A permit to produce Inspected Milk shall be in printed form, issued by the State Board of Health, the permit to be issued from January 1 to December 31 of each year, unless revoked for non-conformance with the requirements.

A receipt shall be given by the producer for the acceptance of the permit, which shall be kept on file in the office of the State Board of Health.

Inspected Milk shall not be above 50 degrees Fahrenheit when delivered to the customer or prior thereto.

All cows shall be tuberculin tested annually by a veterinary physician approved by the State Board of Health, and all cows reacting shall be removed from the herd. No additions shall be made to the herd unless the animals are free from tuberculosis.

All scores of equipment and methods used in handling this milk shall be filed with the State Board of Health and with the local board of health.

Premises must be whitewashed or painted and disinfected at least once a year.

Persons having actual charge in the enforcement of these regulations shall be required to take a practical examination before a person or persons designated by the State Board of Health, in order that their fitness for this duty may be ascertained.

The State Board of Health shall furnish to the producers, at cost, parchment paper covers inscribed with the words "Inspected Milk," the seal of the State Board of Health, and the year for which the permit is issued.

Respectfully submitted,

CARL O. SEAMAN,
Secretary.

At a meeting of the board at the state house, on Tuesday, April 15, 1913, the following statement and requirements were adopted, subject to such amendments as may seem desirable after a further consideration of the subject:

INSPECTED MILK.

License for the production and sale of "Inspected Milk" may be granted by the State Board of Health for a period not exceeding one year after an inspection of the premises where the said milk is to be produced by a representative of the State Board of Health, and after all the requirements promulgated by the board have been provided for, and all of the conditions have been agreed to in writing by the producer.

When all of the conditions and requirements have been met to the satisfaction of the State Board of Health, the latter board may issue a license to use the term "Inspected Milk," and shall furnish milk-bottle caps with such inscription, statement or design as may be decided upon, the same to be paid for by the producer.

The purpose of the procedure is to secure a reasonably clean, safe and healthful milk of a high grade, because produced under strict supervision and better conditions than is usual.

The following, briefly stated and without elaboration of details, are the conditions under which such milk may be produced and sold:

STABLES.

Stables shall be kept well whitewashed, ventilated, and reasonably clean.

The walls shall be whitewashed, unless their construction renders it unnecessary, and they shall be kept free from cobwebs, dirt, etc.

The manure should be removed at least twice daily, and proper bedding should be provided to keep the animals reasonably clean.

COWS.

Physical examination shall be made of the cows at least twice a year by a veterinarian approved by the State Board of Health. The tuberculin test shall be applied at least once a year, and any cows reacting shall be promptly removed from the herd.

No new cows shall be added until after they have passed the tuberculin test and a physical examination by a veterinary surgeon approved by the State Board of Health.

Cows, and especially their udders, shall be clean at the time of milking.

MILK-ROOM.

A milk-room that is clean, light and screened shall be provided for the cooling, bottling and storing of the milk and the operations incident thereto.

EMPLOYEES.

All employees connected in any way with the handling of the milk shall be personally clean and free from any communicable disease.

The health authorities shall be notified at once if any communicable disease appears in any person having to do with the handling of the milk, or in the family of the milk-man or producer. Under such circumstances, no milk shall be disposed of until officially authorized in writing.

UTENSILS.

All utensils and apparatus with which the milk comes in contact shall be thoroughly washed, and sterilized with boiling water or steam, and shall be used for no other purpose than that for which they were designed.

No milk bottles shall be removed from a house in which there is or recently has been a case of communicable disease until official permission is granted.

Small-top milk pails shall be used.

No unwholesome food or food liable to taint the milk shall be fed to the cows.

MILK.

The milk shall not be strained in the cow stable, but shall be removed to the milk-room immediately after it is drawn. It shall be cooled to 50° Fahrenheit, or below, immediately after it is drawn from the cow, and shall be kept at that temperature until it is delivered to the consumer.

The milk shall be delivered in single-service containers, unless special permission for other method of delivery is granted.

The milk shall not contain bacteria in excess of 100,000 per cubic centimeter, and must be entirely free from pathogenic germs.

INSPECTIONS.

Inspections will be made from time to time by inspectors designated by the State Board of Health. No person will be appointed as inspector who has not first obtained a certificate from the superintendent of the dairy department of the New Hampshire College of Agriculture showing the holder to be qualified to perform the duties imposed under the regulations. Samples of the milk for chemical and bacteriological examination may be taken at any time. License to use the term "Inspected Milk" may be revoked at any time for non-compliance with the regulations established by the State Board of Health.

IRVING A. WATSON,

Secretary.

It should be noted that already a large amount of milk inspection work has been done by the State Board of Health through an inspector of the State Board of Health, in coöperation with the regularly appointed local inspectors or the local boards of health in all of our cities and in many of the towns in the state. It was not difficult therefore to select some dairies that might be willing to accede to the requirements of the regulations established by the State Board of Health for the production of "Inspected Milk."

The work of inspection covers many details in connection with the milk business, and in order to record all the particulars necessary

to be taken into consideration, a score card is provided, copy of which is herewith given.

STATE OF NEW HAMPSHIRE.
STATE BOARD OF HEALTH.

SANITARY INSPECTION OF DAIRIES.

Equipment	40 per cent.	Score.....per cent.
Methods	60 per cent.	Score.....per cent.
Perfect Dairy	100 per cent.	Score.....per cent.

Inspection No.....Time.....A. P. M. Date.....191...

Dairyman

P. O. Address.....

Party Interviewed

Operated by

Milk delivered to Milk Station.....

No. Cows.....No. Milking.....No. Qts. Produced.....

All persons in the households of those engaged in producing or handling milk are.....

.....free from all infectious disease.

Date and nature of last case on farm.....

Water Supply for utensils is from a.....located.....feet deep

and apparently is.....pure and wholesome.....

State any possible contamination located within 200 feet of source of water supply

or if water supply is not protected against surface drainage.....

.....

Water supply on this farm analyzed.....191... Result.....

Style of Cow Barn.....Length.....ft. Width.....ft. Height of ceiling.....ft.

Dairy Herd examined by.....on.....191... Report.....

EQUIPMENT

	Perfect	Allow
Cow Stable is.....located on elevated ground, with no stagnant water, hog-pen, privy, uncovered cesspool or manure pit within 100 feet.....	1	.....
Floors, other than cow beds, are.....of concrete or some non-absorbent material	2	.....
Floors are.....properly graded and water-tight.....	2	.....
Cow Beds are.....of concrete or planks laid on concrete.....	2	.....
Drops are.....constructed of concrete, stone or some non-absorbent material	2	.....
Drops are.....water-tight and space beneath is clean and dry.....	2	.....
Ceiling is constructed of.....and is.....tight and dust-proof....	2	.....
Windows No.....total square feet.....there is.....2 square feet of window light for each 600 cu. ft. air space (1 sq. ft. per 600 cu. ft.—1).....	2	.....
Ventilation consists of.....sq. ft. muslin covered openings or		
.....sq. ft. open chutes in ceiling or.....		
.....which is sufficient 3, fair 2, poor 1, insufficient 0...	3	.....
Air Space is.....cu. ft. per cow (600 and over—3) (500 to 600—2) (400 to 500—1) (under 400—0).....	3	.....
Live Stock, other than cows, are.....excluded from rooms in which milch cows are kept.....	2	.....
There is.....direct opening from stable into silo or grain pit....	1	.....
Separate quarters are.....provided for cows when calving or sick...	1	.....
Cow Yard.....is properly graded and drained.....	2	.....
Water Supply for cows is.....unpolluted and plentiful.....	1	.....
Milk House has.....direct opening into cow barn or other building	1	.....
Milk house has.....sufficient light and ventilation.....	1	.....
Floor is.....properly graded and water-tight.....	1	.....
Milk house is.....properly screened to exclude flies.....	1	.....
Milk Pails are.....of smoothly tinned metal in good repair.....	1	.....
Milk pails have.....all seams soldered flush.....	1	.....
Milk pails are.....of the small mouthed design, top opening not exceeding 8 inches in diameter. Diameter.....	4	.....
Racks are.....provided to hold milk pails and cans when not in use	1	.....
Special Milking Suits are.....provided.....	1	.....

METHODS.

	Perfect	Allow
Stable Interior painted or whitewashed on.....which is saistfac- tory 3, fair 2, unsatisfactory 1, never 0.....	3	.....
Feeding Troughs, platforms or cribs are.....well lighted and clean..	1	.....
Ceiling is.....free from hanging straw, dirt or cobwebs.....	1	.....
Window Panes are.....washed and kept clean.....	1	.....
Walls and Ledges are.....free from dirt, dust, manure or cobwebs	2	.....
Floors and Premises are.....free from dirt, rubbish or decayed animal or vegetable matter.....	2	.....
Cow Beds are.....clean, dry and no horse manure used thereon	2	.....
Manure is.....removed to field daily 4, to at least 100 feet from barn 2, stored less than 100 feet or where cows can get at it 0	4	.....
Liquid Matter is.....allowed to saturate ground under or around cow barn.....	2	.....
Milking Stools are.....clean.....	1	.....
Cow Yard is.....clean and free from manure.....	2	.....
Cows have.....been tuberculin tested and all tuberculous cows removed.....	7	.....
Cows are.....all in good flesh and condition at time of inspection	2	.....
Cows are.....all free from clinging manure and dirt. (No. dirty.....)	4	.....
Long Hairs are.....kept short on belly, flanks, udder and tail....	1	.....
Udder and Teats of cows are.....thoroughly brushed and wiped with a clean damp cloth before milking.....	3	.....
All Feed is.....of good quality and distillery waste or any sub- stance in a state of putrefaction is.....fed.....	2	.....
Milking is.....done with dry hands.....	2	.....
Fore Milk of first few streams from each teat is.....discarded.....	2	.....
Clothing of Milkers is.....clean.....	1	.....
Facilities for washing hands of milkers are.....provided in cow barn or milk house.....	2	.....
Milk is strained at.....and.....in clean atmosphere.....	1	.....
Milk is.....cooled within two hours after milking to 50 de- grees F. 3; to 55 degrees F. 2; to 60 degrees F. 1.....	3	.....
Ice is.....used for cooling milk.....	1	.....
Milk House is.....free from dirt, rubbish and all material not used in the handling and storage of milk.....	2	.....
Milk Utensils are.....rinsed with cold water immediately after using and washed clean with hot water and washing solution....	2	.....
Utensils are.....sterilized by steam or boiling water after each using	2	.....
Privy is.....in sanitary condition, with vault and seats..... covered and protected.....	1	.....
	60	

Remarks

Duplicate Score Sent.....19.....

Inspector.

After all of the requirements have been complied with and agreed to over the signature of the proprietor of the dairy, a license is issued to him to produce and sell inspected milk, for a period of one year. Milk caps designed for his especial use are furnished to him at cost, showing that he has been licensed by the State Board of Health.

In order to know that the requirements are lived up to, samples of milk are taken from the delivery wagon monthly, or as often as desired by the State Board of Health, and submitted to the State Laboratory of Hygiene for bacterial and other examinations, and a report is made to the local milk inspector or to the local board of health, as the case may be, and also to the dairy. Following is a copy of the report card used, with an explanation of the method of marking; also a sample milk cap.

STATE OF NEW HAMPSHIRE.
STATE BOARD OF HEALTH.

SCORE CARD FOR INSPECTED MILK.

Name of Dairy Farm.....
Location
Proprietor
P. O. Address.....
Date of Collection.....Taken from.....
Collected by
TEMPERATURE SAMPLE No. 1.....No. 2.....

ITEM	Possible Maximum Score	No. 1 Score Allowed	No. 2 Score Allowed
Bacteria	50	.....	.....
Flavor and Odor.....	15	.....	.....
Visible Dirt	25	.....	.....
Acidity	5	.....	.....
Bottle and Cap.....	5	.....	.....
Total	100	.....	.....

REMARKS.

Bacteria found per cubic centimeter—No. 1.....
Bacteria found per cubic centimeter—No. 2.....
Flavor

Odor

.....

Per cent found.....

Cap

Bottle

.....*Bacteriologist.*

.....*Secretary.*

NOTE—The above is a sanitary rating only, and does not include total solids or fat content. Any milk found to be below the standard required by law will constitute sufficient cause for the cancellation of license, and for legal procedure against the producer or vendor.

DIRECTIONS FOR SCORING INSPECTED MILK.

BACTERIA PER CUBIC CENTIMETER—PERFECT SCORE, 50.

Points	Points
3,000 or less.....50	40,001 to 45,000.....39
3,001 to 4,000.....49.5	45,001 to 50,000.....38
4,001 to 5,000.....49	50,001 to 55,000.....37

	Points.		Points.
5,001 to 6,000.....	48.5	55,001 to 60,000.....	36
6,001 to 7,000.....	48	60,001 to 65,000.....	35
7,001 to 8,000.....	47.5	65,001 to 70,000.....	34
8,001 to 9,000.....	47	70,001 to 75,000.....	33
9,001 to 10,000.....	46	75,001 to 80,000.....	32
10,001 to 15,000.....	45	80,001 to 85,000.....	31
15,001 to 20,000.....	44	85,001 to 90,000.....	30
20,001 to 25,000.....	43	90,001 to 95,000.....	29
25,001 to 30,000.....	42	95,001 to 100,000.....	28
30,001 to 35,000.....	41	Over 100,000.....	0
35,001 to 40,000.....	40		

NOTE—When the number of bacteria per cubic centimeter exceeds 100,000 the score shall be 0.

FLAVOR AND ODOR—PERFECT SCORE, 15.

Deductions for disagreeable or foreign odor or flavor should be made according to conditions found. When possible to recognize the cause of the difficulty it should be described under Remarks.

VISIBLE DIRT—PERFECT SCORE, 25.

Examination for visible dirt should be made only after the milk has stood for some time undisturbed in any way. Raise the bottle carefully in its natural, upright position, without tipping, until higher than the head. Observe the bottom of the milk with the naked eye or by the aid of a reading glass. The presence of the slightest movable speck makes a perfect score impossible. Further deductions should be made according to the amount of dirt found. When possible, the nature of the dirt should be described under Remarks.

ACIDITY—PERFECT SCORE, 5.

	Points		Points
0.2 per cent and less.....	5	0.23 per cent.....	2
0.21 per cent.....	4	0.24 per cent.....	1
0.22 per cent.....	3	Over 0.24 per cent.....	0

BOTTLE AND CAP—PERFECT SCORE, 5.

Bottles should be made of clear glass and free from attached metal parts. Caps should be sealed in their place with hot paraffin, or both cap and top of bottle covered with parchment paper or other protection against water and dirt. Deduct for tinted glass, attached metal parts, unprotected or leaky caps, partially filled bottles, or other conditions permitting contamination of milk or detracting from the appearance of the package.

BACTERIOLOGICAL DEPARTMENT.

BY CHARLES DUNCAN, M. D., *Bacteriologist*.

Following is a report of the bacteriological department of the State Laboratory of Hygiene for the two fiscal years ending August 31, 1914:

During the period named, 8,235 examinations were made, under the following classifications:

TABLE NO. I.

Sputum	3,567
Throat cultures	3,360
Widal reaction, for typhoid.....	845
Suspected gonorrhœa	342
Miscellaneous*	140
<hr/>	
Total	8,254

The above table does not include bacteriological examinations of water supplies or inspected milk, as these results are given in the chemist's report.

It will be seen by the table that the greater part of the work was in making routine clinical examinations for physicians, chiefly in suspected cases of diphtheria, typhoid and tuberculosis. Investigations, however, are made willingly of any conditions connected with public health questions. Research work in the line of original investigations will be undertaken if conditions warrant it.

To be of the greatest possible aid to physicians in clinical work, bacteriological outfits must be so distributed throughout the state as to be of easy access. They are furnished free, and are distributed by drug stores in the various towns and cities, as well as by some boards of health, for the use of all physicians.

These outfits are such as have been approved by the postoffice authorities, and no other can be used under Federal regulations. There should be no lack of outfits in any town. Druggists should see that their supply is not exhausted. In localities where there is no depository, outfits are mailed directly to physicians upon request. It is the purpose of the department to have supplies kept within convenient

*Under Miscellaneous examinations are included malaria, glanders, tissue examinations for tuberculosis, urines for typhoid bacilli, pus, and some unusual conditions to determine clinical questions.

reach of physicians, and to do this the coöperation of druggists and of physicians themselves is at all times necessary.

The laboratory will put up, for immediate forwarding, packages containing fifty or more outfits, to be used in taking cultures from the throats of school children.

The number of outfits sent out for the use of physicians very largely exceeds the number returned to the laboratory, which seems to show a lack of economical care in this respect. We state this fact trusting that greater care may be exercised against the loss, which entails considerable expense upon the laboratory.

TUBERCULOSIS.

During the period covered by the report, 3,567 specimens of sputum in suspected cases of tuberculosis were examined, a slight decrease over previous like period. Of these, 679 or 19 per cent., were found to contain the tubercle bacillus.

TABLE II.

Table II shows the number of specimens received from the different towns and cities. It is a noticeable fact that when influenza, cold and coughs are prevalent, the laboratory receives fewer tuberculosis specimens, yet this very time is especially favorable for the discovery of the tubercle bacillus, as in some instances, at least, it may be the primary cause of the so-called cold or cough.

TABLE II.—TUBERCULOSIS.

	Positive.	Negative.	Total.	Duplicate.
Allenstown	0	3	3	0
Alstead	2	16	18	3
Alton	0	4	4	0
Amherst	1	0	1	0
Andover	0	4	4	0
Antrim	0	1	1	0
Ashland	1	26	27	3
Bennington	3	1	4	0
Bartlett	3	30	33	0
Bath	0	4	4	0
Belmont	3	3	6	0
Berlin	18	81	99	6
Bethlehem	2	5	7	0

	Positive.	Negative.	Total.	Duplicate.
Boscawen	2	4	6	0
Barnstead	0	14	14	0
Bradford	1	5	6	0
Bristol	7	4	11	0
Brooklyn	1	3	4	0
Campton	0	1	1	0
Canaan	0	4	4	0
Centre Harbor	0	3	3	0
Charlestown	2	10	12	0
Chester	0	1	1	0
Claremont	10	44	54	0
Colebrook	5	21	26	0
Concord	57	331	388	20
Conway	5	32	37	13
Derry	3	13	16	2
Dover	41	144	185	13
Durham	0	4	4	0
Eaton	0	1	1	0
Enfield	2	14	16	0
Epsom	1	8	9	0
Epping	3	7	10	0
Exeter	9	68	77	11
Farmington	1	20	21	3
Fitzwilliam	5	22	27	4
Franconia	3	12	15	0
Franklin	16	99	115	20
Freedom	2	5	7	0
Fremont	2	2	4	0
Gerrish	3	1	4	0
Goffstown	3	10	13	0
Grasmere (County Farm).....	45	97	142	23
Gorham	4	9	13	1
Greenfield	2	7	9	0
Greenland	0	6	6	0
Greenville	2	6	8	0
Groveton	1	12	13	0
Hampton	2	5	7	0
Hanover	8	114	122	0

	Positive.	Negative.	Total.	Duplicate.
Haverhill	6	29	35	1
Hudson	0	5	5	0
Hillsborough	4	16	20	0
Hinsdale	0	4	4	0
Hill	0	2	2	0
Hollis	0	4	4	0
Hooksett	3	4	7	1
Keene	25	110	135	24
Kingston	1	2	3	0
Laconia	13	33	46	1
Lancaster	4	13	17	0
Lebanon	14	39	53	12
Lempster	0	2	2	0
Lincoln	0	12	12	2
Lisbon	6	25	31	4
Littleton	11	85	96	17
Loudon	2	1	3	0
Lyme	0	14	14	2
Madison	0	1	1	0
Manchester	126	449	575	42
Marlow	0	1	1	0
Meredith	7	7	14	2
Meriden	1	1	2	0
Milford	11	22	33	3
Milton	0	3	3	0
Nelson	0	1	1	0
Nashua	42	159	201	31
New Boston	2	11	13	2
New Hampton	0	3	3	0
New London	1	7	8	0
Newmarket	5	5	10	1
Newport	8	27	35	4
Northwood	1	3	4	0
Nottingham	0	0	0	0
Orford	1	2	3	0
Peterborough	0	19	21	6
Pittsfield	0	4	4	0
Plaistow	2	4	6	0

	Positive.	Negative.	Total.	Duplicate.
Plymouth	5	32	37	9
Portsmouth	26	125	151	25
Raymond	0	2	2	0
Rochester	7	14	21	0
Rumney	0	9	9	0
Salem	2	2	4	0
Salisbury	0	0	0	0
Sanbornville	2	3	5	0
Sandwich	1	9	10	1
Somersworth	20	49	69	7
Stewartstown	4	10	14	2
Stratton	0	2	2	0
Sunapee	1	2	3	0
North Stratford	2	5	7	0
Sutton	1	3	4	0
Swanzy	2	3	5	0
Temple	4	1	5	4
Tilton	5	11	16	5
Troy	2	15	17	4
Wentworth	1	1	2	0
Unity	0	4	4	0
Walpole	1	9	10	0
Warner	0	1	1	0
Warren	0	1	1	0
Whitefield	3	26	29	0
Wilton	2	12	14	0
Winchester	1	2	3	0
Woodsville	6	25	31	5
Wolfeboro	2	10	12	0
Out of state.....	2	31	33	6
Totals	679	2,888	3,567	338

Of the 678 cases in which the sputum was found to contain tubercle bacilli, 584 were from patients whose ages were given by the physicians as classified in Table III.

TABLE III.—SHOWING AGE AND SEX OF 732 POSITIVE CASES OF TUBERCULOSIS.

Ages.	Males.	Females.	Total.
0 to 10.....	2	2	4
11 to 15.....	3	7	10
16 to 20.....	20	36	56
21 to 30.....	101	91	192
31 to 40.....	89	65	154
41 to 50.....	50	40	90
51 to 60.....	22	12	34
61 years and over.....	23	11	34
Total	310	264	574

The above table shows most emphatically the ravages of tuberculosis, in that it takes from the community a large percentage of its victims at the most productive period of life. This is even more vividly shown in Table IV, by percentages.

TABLE IV.—PERCENTAGES OF CASES OF TUBERCULOSIS BY AGE PERIODS.

Ages.	Percentages.
0 to 20.....	12
21 to 40.....	64.9
41 years and over.....	23.1

The reports of the physicians at the time of sending the specimens to the laboratory showed that 345 of the patients were at that time unable to perform any labor, while 132 were at work. The condition of 97 in this respect was not stated.

DIPHTHERIA.

The total number of throat cultures examined was 3,350; of these 518 contained diphtheria bacilli. The number of cultures received from the different cities and towns is shown in Table V.

TABLE V.

	Positive.	Negative.	For Diagnosis.	For Release.	Not Stated.
Alstead	0	7	0	0	7
Alton	0	1	1	0	0
Amherst	2	14	6	10	0
Antrim	2	7	5	0	4

	Positive.	Negative.	For Diagnosis.	For Release.	Not Stated.
Andover	1	8	8	1	0
Ashland	0	6	6	0	0
Barnstead	0	3	3	0	0
Bartlett	0	7	7	0	0
Belmont	0	2	2	0	0
Berlin	29	80	49	60	0
Bethlehem	0	2	2	0	0
Bradford	0	1	1	0	0
Bristol	0	5	5	0	0
Brookline	1	1	0	0	2
Canaan	2	3	3	2	0
Charlestown	9	12	9	12	0
Chester	1	10	2	9	0
Claremont	18	60	40	38	0
Concord	88	884	540	202	230
Colebrook	1	4	3	1	1
Conway	37	103	75	57	8
Center Harbor	0	5	5	0	0
Dover	3	20	23	0	0
Derry	7	42	36	13	0
Deerfield	0	0	0	0	0
Exeter	13	32	33	12	0
Epping	0	6	6	0	0
Epsom	0	2	2	0	0
Farmington	4	14	15	3	0
Fitzwilliams	2	2	2	2	0
Franconia	3	14	13	4	0
Franklin	34	112	87	59	0
Freedom	0	1	1	0	0
Goffstown	0	18	18	0	0
Gorham	1	4	3	2	0
Gilsum	1	0	1	0	0
Grantham Hill.....	3	7	3	7	0
Grasmere	1	3	1	3	0
Greenland	0	5	5	0	0
Greenfield	5	8	4	9	0
Greenville	0	1	1	0	0

	Positive.	Negative.	For Diagnosis.	For Release.	Not Stated.
Groveton	0	7	5	2	0
Hampstead	0	5	5	0	0
Hanover	0	21	21	0	0
Haverhill	1	3	4	0	0
Henniker	4	14	6	12	0
Hinsdale	0	8	7	0	1
Hillsborough	3	23	20	6	0
Hollis	0	9	9	0	0
Hopkinton	0	1	1	0	0
Hudson	1	3	4	0	0
Jaffrey	0	3	2	0	1
Jackson	2	6	3	5	0
Keene	7	70	60	13	4
Hooksett	2	3	2	3	0
Laconia	2	15	16	1	0
Lakeport	0	0	0	0	0
Lancaster	2	14	14	2	0
Lebanon	14	42	28	18	10
Littleton	39	206	151	94	0
Lincoln... ..	2	3	2	3	0
Lisbon	5	8	8	5	0
Londonderry	0	2	2	0	0
Loudon	8	5	6	7	0
Lyme	1	2	3	0	0
Manchester	35	280	228	74	13
Madison	0	6	3	3	0
Meriden	0	1	1	0	0
Meredith	0	2	2	0	0
Milton Mills	8	13	11	10	0
Milford	24	62	37	45	4
Nashua	30	140	60	107	3
New Boston	0	6	6	0	0
New London	1	3	2	2	0
Newmarket	0	0	0	0	0
Newport	7	38	26	11	8
Northwood	0	2	1	1	0
Orford	0	2	2	0	0

	Positive.	Negative.	For Diagnosis.	For Release.	Not Stated.
Pike.....	0	1	0	1	0
Plaistow	0	3	2	1	0
Plymouth	0	9	6	1	2
Portsmouth	16	69	30	52	3
Rochester	9	76	44	38	3
Troy	0	4	4	0	0
Rumney	0	3	0	0	3
Salem	2	1	1	0	2
Somersworth	2	8	8	2	0
Stewartstown	1	1	2	0	0
Stratford	0	1	1	0	0
Suncook	0	8	7	1	0
Sutton	0	2	1	1	0
Swanzey	1	1	2	0	0
Tilton	0	6	5	1	0
Tuftonborough.....	0	4	0	4	0
Union	0	3	3	0	0
Walpole	3	14	9	6	2
Warner	0	13	13	0	0
Warren	0	2	2	0	0
Whitefield	2	5	7	0	0
Wilton	3	19	3	3	16
Winchester	9	20	15	0	14
Weare	0	1	0	1	0
Wolfeboro	2	7	6	3	0
Wakefield	1	4	5	0	0
Woodsville	0	7	0	6	1
White River Jct., Vt...	0	2	2	0	0
Wakefield	<u>1</u>	<u>4</u>	<u>5</u>	<u>0</u>	<u>0</u>
Total	518	2,842	1,967	1,051	342

The following table shows the laboratory results in 1,235 cases in which the attending physician made a definite statement of diagnosis from clinical symptoms only:

TABLE VI.

Clinical Diagnosis.	Total cases.	Laboratory Examination.	
		Positive.	Negative.
Diphtheria	267	180	87
Not Diphtheria	860	83	777
Doubtful	108	23	85
	1,235	286	949

The following table exhibits by percentages the difference between the clinical diagnosis and the results of the laboratory examination:

TABLE VII.

Clinical Diagnosis.	Laboratory Examination. Percentages.	
	Positive.	Negative.
Diphtheria	64.4	35.6
Not Diphtheria	3.5	96.5
Doubtful	21.2	78.8

These figures demonstrate what has been proven over and over again, namely, that it is absolutely impossible to make a correct diagnosis in many, and perhaps in most, cases of throat infection from the clinical symptoms alone.

Frequently an exudate is present when the culture is negative so far as diphtheria is concerned. Of the cases with a clinical record of exudate or membrane, 38 per cent. proved positive in culture; while of the cases with a clinical record of no exudate or membrane, 14 per cent. proved to be positive diphtheria in culture. This would appear to indicate that antitoxin should be administered in cases in which an exudate or a membrane is present, and that the case should be held as "suspicious" until at least three negative laboratory reports have been obtained.

Before making cultures from the swab, an examination by smear is always made for the diphtheria bacillus, and yields results in approximately 45 per cent. of cases, with a saving of time of from 14 to 16 hours in making a report.

TYPHOID FEVER.

The laboratory examined 836 specimens of blood for the Widal reaction 135 were positive. The table following shows cities and towns from which specimens were received.

The strains of typhoid bacilli used for Widal are from different sources, and several different strains are used on same sample of blood but we find that the percentage of positives remains the same. Occasionally differences in the power of some bloods to clump the different strains are noticed. If sufficient blood is sent to the laboratory in the container a bile growth is made from the clot but here again the percentage of positives remains the same.

Of the 135 cases reported positive, 67, about one half, the doctor made a positive diagnosis of typhoid fever and the other half did not state any opinion as to diagnosis.

Of the 701 cases reported negative, 312 stated the case to be one of typhoid fever; 389 did not give any opinion as to diagnosis.

TABLE VIII.

	Positive Widal Reaction.	Negative Widal Reaction.
Doctor's diagnosis typhoid.....	67	312
Doctor's diagnosis not stated.....	68	389

The above table shows that in about one half the cases sent to the laboratory for the Widal reaction the diagnosis of laboratory is at variance with the diagnosis written on the card, and *vice versa*. It is difficult to harmonize this fact with our knowledge of the value of the Widal reaction but we surmise that, considering the actual number of cases of typhoid fever reported to the State Board of Health, that the laboratory finds positive Widal reactions in the requisite number of bloods sent from actual cases as they afterwards develop.

TABLE IX.—TYPHOID FEVER.

	Positive.	Negative.	Total.
Amherst	0	1	1
Alstead	0	3	3
Andover	0	2	2
Antrim	4	8	12
Ashland	0	4	4
Bartlett	1	4	5
Belmont	5	4	9
Bennington	5	4	9
Bath	2	1	3
Berlin	0	5	5
Bristol	0	3	3

	Positive.	Negative.	Total.
Bradford	0	2	2
Candia	2	8	10
Center Harbor	0	1	1
Charlestown	1	5	6
Claremont	7	29	36
Concord	11	105	116
Conway	1	7	8
Derry	2	4	6
Dover	0	19	19
Durham	0	7	7
Enfield	2	2	4
Exeter	3	18	21
Francestown	0	1	1
Franklin	1	15	16
Farmington	6	16	22
Gorham	0	3	3
Gilsum	0	2	2
Goffstown	0	4	4
Grasmere	0	5	5
Greenville	0	2	2
Groveton	2	6	8
Hanover	13	29	42
Hudson	0	1	1
Londonderry	0	2	2
Henniker	0	2	2
Hillsborough	0	11	11
Hinsdale	2	5	7
Hooksett	0	2	2
Keene	8	48	56
Laconia	0	9	9
Lancaster	2	4	6
Lebanon	2	8	10
Lisbon	1	14	15
Littleton	2	9	11
Meriden	0	2	2
Milan	1	1	2
Milford	1	3	4
Milton	0	2	2
Nashua	3	17	20

	Positive. 19	Negative. 92	Total. 111
Manchester			
New Boston	1	5	6
New London	1	3	4
Newmarket	0	1	1
Newport	0	6	6
Pittsfield	0	1	1
Northwood	0	1	1
Peterborough	1	0	1
Plymouth	3	19	22
Portsmouth	4	38	42
Raymond	0	1	1
Rochester	0	1	1
Sandwich	0	4	4
Somersworth	7	11	18
Stewartstown	0	1	1
Stratford	0	1	1
Suncook	0	1	1
Sutton	0	2	2
Troy	0	2	2
Union	1	0	1
Washington	0	2	2
Walpole	3	4	7
Warner	0	1	1
White River Junction (Lebanon).....	3	4	7
Wilton	3	13	16
Winchester	0	5	5
Wolfeboro	0	8	8
Woodsville	2	6	8
Whitefield	2	3	5
Total	<hr/> 140	<hr/> 705	<hr/> 845

GONORRHEA.

Three hundred forty-two specimens of pus mostly from genital organs, a few from the eye, were examined for gonococci. One hundred and eight (51.8 per cent.) were found to be positive. The laboratory calls the case positive only when the diplococcus is found within the pus cell and is responsive to Grams stain. The greater number of the positive specimens were in males between the age of 20 and 30.

Only 48 were from females. Twenty were from children under ten years of age. Fourteen were from the eye.

The number of towns that make use of the laboratory for this test are still too few—only thirty in number—an increase over last year, but we can hardly believe that it is generally understood that this test is made by the laboratory free of charge and that a regulation outfit is furnished. It is advisable that more physicians take advantage of this test examination. There is such a thing as a urethritis due to bacteria other than the gonococcus and the patient should have the benefit of the doubt.

TABLE X.

No. of Examinations.		Positive.	Negative.
342	.....	108	134
Eye Specimens.		Urethral.	Vaginal.
20	.....	264	48.

INFECTIOUS DISEASES OF ANIMALS.

The laboratory is frequently called upon to examine specimens from animal sources, this includes, besides milk already mentioned, tissues of various kinds, pus and other discharges from diseased cattle, sheep, fowls and swine. Eight specimens showed the presence of tubercle bacilli; six revealed the presence of parasites, and ten of inflammation. Examinations for glanders are frequently made in the laboratory through inoculation of Guinea pigs from specimens of the product received. The laboratory has no outfit designed especially for the collection of specimens from glandered horses, but the ordinary diphtheria outfit, which can be obtained at any supply station, answers every purpose.

TYPHOID URINES.

The laboratory is always ready to make urinary examinations in cases suspected of being typhoid bacilli carriers. Twelve such cases were examined during the period covered by this report, all of which were negative.

MISCELLANEOUS EXAMINATIONS.

The results of the work of the bacteriological department on milk, cream, ice cream and public and private water supplies is included in the report of the state chemist.

The examination of milk for tubercle bacilli is not routine work. That there are being sold in open market milk and cream containing these germs, there can be no doubt. Samples submitted from city supplies often contain tubercle bacilli. The relation of the germ of bovine tuberculosis to that of man is an unsettled question, but enough has been determined to warrant the exclusion of milk from tubercular cattle for domestic use.

The laboratory test for tuberculosis in milk consists of the inoculation of Guinea pigs with the sediment obtained by the centrifuge. If the bacilli are present, the animal very soon develops the disease.

All samples of water from public and private supplies receive an examination for presumptive evidence of contamination from human excretions. This consists in most cases of the gas test in bile media; but in some cases a bacteriological count is made.

At present, the state makes routine bacteriological efficiency tests for the various filter plants in the state, and the results are found in the report of chemist.

FINANCIAL STATEMENT.

EXPENSES OF THE STATE BOARD OF HEALTH.

For the Year Ending August 31, 1913.

Salary of Secretary	\$2,500.00
Salary of Clerk	500.00
Expenses of Board, Incidentals and Office Supplies	416.69
Printing Blanks	172.85
Printing Report	813.01
<hr/>	
Total	\$4,400.55

Expenses for the Year Ending August 31, 1914.

Salary of Secretary	\$2,500.00
Salary of Clerk	500.00
Incidentals	442.61
Printing Blanks	249.31
<hr/>	
Total	\$4,191.92

STATE LABORATORY OF HYGIENE.

Expenses for the Year Ending August 31, 1913.

Salaries (2 Chemists)	\$3,000.00
Salaries (2 bacteriologists)	1,800.00
Printing Blanks	313.41
Incidentals	1,099.61
<hr/>	
Total	\$6,213.02

Expenses for the Year Ending August 31, 1914.

Salaries of Chemists (2)	\$3,000.00
Salaries of Bacteriologists (2)	1,800.00
Incidentals	1,117.22
Printing	347.59
<hr/>	
Total	\$6,264.81

STATE BOARD OF HEALTH.

SANITARY INSPECTION SERVICE.

Expenses for the Year Ending August 31, 1913.

Services and Expenses of Inspectors	\$1,765.71
Incidental Expenses	716.43
	<hr/>
Total	\$2,482.14

Expenses for the Year Ending August 31, 1914.

Services and Expenses of Inspectors	\$2,032.30
Incidental Expenses	211.55
	<hr/>
Total	\$2,243.85

 EMBALMER'S LICENSES.

Received for 33 Licenses Issued	\$165.00
Deposited with State Treasurer	165.00

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FIFTEENTH REPORT

(TENTH BIENNIAL)

OF THE

BOARD OF COMMISSIONERS OF LUNACY

FOR THE

STATE OF NEW HAMPSHIRE

FOR THE

Two Fiscal Years Ending August 31, 1914.

VOLUME III - - PART II.

PRINTED BY IRA C. EVANS CO., CONCORD
BOUND BY JOHN B. CLARKE CO., MANCHESTER

STATE OF NEW HAMPSHIRE.

OFFICE OF THE COMMISSIONERS OF LUNACY.

STATE HOUSE, September 1, 1914.

To His Excellency the Governor and the Honorable Council:

In conformity to the laws of the state of New Hampshire, I have the honor to present herewith the fifteenth report of the Board of Commissioners of Lunacy, for the two fiscal years ending August 31, 1914.

Respectfully submitted,

Irving A. Watson

Secretary.

Members of the Board.

GOVERNOR SAMUEL D. FELKER, Rochester.

ATT'Y-GEN. JAMES P. TUTTLE, Manchester.

ROBERT FLETCHER, C. E., PRESIDENT, Hanover.

FRANK E. KITTREDGE, M. D., Nashua.

D. E. SULLIVAN, M. D., Concord.

IRVING A. WATSON, M. D., SECRETARY, Concord.

REPORT.

HEREWITH is presented the fifteenth report of the Board of Commissioners of Lunacy, for the years 1913 and 1914.

The Commission is authorized to examine into the care of the insane, all of which are wards of the state, and is empowered to cause the removal of any indigent insane person to the New Hampshire State Hospital for treatment. It is further required to keep a correct record of the number of commitments, discharges, and deaths at the asylums for the insane, with age, sex and nationality, and to make a report of the same to the governor and council. In accordance with this, the following tables are submitted:

- TABLE 1. Commitments to the several institutions for the year 1913.
- TABLE 2. Discharges for the year 1913.
- TABLE 3. Deaths for the year 1913.
- TABLE 4. Commitments to the several institutions for the year 1914.
- TABLE 5. Discharges for the year 1914.
- TABLE 6. Deaths for the year 1914.
- TABLE 7. List of persons who received state aid at the New Hampshire State Hospital by order of the Commissioners of Lunacy, during the two years, September 1, 1912-August 31, 1914, inclusive.
- TABLE 8. Number of commitments, discharges and deaths at the several institutions named, with the number of inmates remaining August 31, 1913.

TABLE 9. Number of commitments, discharges and deaths at the several institutions named, with the number of inmates remaining August 31, 1914.

TABLE 10. Showing the number of inmates in each asylum in the state at the end of each fiscal year from 1889 to 1914, inclusive.

The law under which the State Board of Commissioners may provide for the treatment of indigent insane persons is as follows:

“AN ACT TO PROVIDE FOR THE INDIGENT INSANE.

“Be it enacted by the Senate and House of Representatives in General Court convened:

“SECTION 1. The State Board of Commissioners of Lunacy is hereby empowered to transfer any indigent insane person to the New Hampshire State Hospital, there to be supported by the state, provided satisfactory affidavits are executed by the selectmen, or county commissioners, or both, as the said board may require, to the effect that neither the patient, nor any relative chargeable therewith, is able to bear the expense incident to his maintenance at the said hospital.

“SECT. 2. Indigent insane persons at the New Hampshire State Hospital, for remedial treatment or otherwise, may be maintained by the state at the said hospital upon orders issued to that effect by the State Board of Commissioners of Lunacy, having first in each case obtained satisfactory evidence as provided for in section 1 of this act.

“SECT. 3. In a case where the patient, or relatives chargeable with his support are able to pay only a part of the expense of maintaining the said patient at the New

Hampshire State Hospital, the State Board of Commissioners of Lunacy, upon satisfactory evidence of the facts, may direct that such part of the expense of maintenance at the said hospital as cannot be met by the patient or relatives chargeable therewith, be paid by the state.

“SECT. 4. All acts and parts of acts inconsistent with this act are hereby repealed, and this act shall take effect upon its passage.

“[Approved April 3, 1907.]”

Application to the board for the support of an indigent insane person at the New Hampshire State Hospital is made upon blank furnished by the board as follows:

THE STATE OF NEW HAMPSHIRE.

APPLICATION FOR STATE AID FOR AN INDIGENT INSANE PERSON.

This blank must be filled as completely as possible and sworn to by the proper authority. See “Special Notice” on reverse side of this page.

To the Board of Commissioners of Lunacy:

Under the provisions of the laws of the State of New Hampshire, application is hereby made for state aid, at the New Hampshire State Hospital, for the following named person:

Name,..... From what Town?.....

Age,..... Sex,..... Color,..... Nativity,.....

Civil State,*..... How long has said person been in-
 sane?..... Where is said person at the present
 time?..... Has said person ever been an
 inmate of any Asylum for the Insane?.....
 If so, name of institution,.....When, and
 how long there?.....Condition when dis-
 charged..... By whom supported at
 present?..... Has said person any
 property?..... If so, state what and its approximate
 value,
 Does said person receive a pension?..... If so, how
 much per month?..... Are there any
 sources from which partial support at State Hospital might
 be received?.....
 Has said person a guardian?..... If so, give name and
 address,
 Give name and address of nearest relative.....

 Has said person any relative legally chargeable therewith
 that is able to support said patient wholly, or in part, at the
 New Hampshire State Hospital?..... If so, give address
 and state how much per quarter towards support will be
 paid,

* Whether single, married or widowed.

We have investigated the case fully and declare that the facts are as stated above.

(State official capacity.)

.....

.....SS.

*Personally appeared the above named.....
 this.....day of..... 19 , and made oath that
 the foregoing statement by them subscribed is true.*

Before me,

.....

Justice of the Peace.

Town,.....

SPECIAL NOTICE.

All applications for State Aid at the New Hampshire State Hospital must be signed and sworn to:

(a) By at least two members of the Board of Selectmen,
or

(b) By at least two members of the Board of County Commissioners, or

(c) By the Mayor of a city and the Overseer of the Poor.
All questions in this blank must be answered.

SECT. 12. The relations of any poor person, in the line of father or grandfather, mother or grandmother, children or grandchildren, of sufficient ability, shall be liable to maintain him when standing in need of relief. If he has no such relations of sufficient ability, the town wherein he has a legal settlement shall be liable for his support. (Chapter 84, P. S.)

It not infrequently happens that the application for State Aid is incompletely filled, or, rather, sufficient information is not given upon which to determine whether or not aid should be granted, or if granted, whether the support should be in whole or in part. It then becomes necessary to make special inquiries concerning the case. Some applications have been refused, because it was found that means for the partial or entire support of the patient were available.

An examination of Table No. 9 reveals the fact that very few insane persons are now remaining at the county institutions, and nearly all, if not all, of these are so demented as not to be amenable to treatment, and wholly unapprecia-

tive of their surroundings, and should, perhaps, be classed as idiotic rather than insane; nevertheless, they have been returned as belonging to the insane class.

There were at the New Hampshire State Hospital, at the close of the fiscal year, 1,110 insane persons—the largest number on record. It will be seen by reference to Table No. 10, that the insane have increased from year to year far in advance of the growth in population. The State Hospital has reached the limit of its present capacity, and it will be the duty of the next legislature to provide additional buildings for the institution. A special building for excitable females should be provided. Doubtless, the needs of the institution will be presented in the biennial report of the superintendent to the legislature, or in a special report on the subject.

In connection with this subject, we wish to call attention to the great need of a building, or ward, for the care of the criminal insane. The transfer of criminals from the New Hampshire State Prison to the New Hampshire State Hospital for observation, etc., with the occasional escape of the prisoner from the latter institution, is a matter of record, and shows the lack of suitable provisions at the State Hospital for the detention of that class of unfortunates.

This subject was briefly considered at the last session of the legislature in the presentation of a plan to establish a ward within the New Hampshire State Prison for the care of such cases, the ward to be in charge of the State Hospital physicians, thereby bringing the patients under the care of trained and skilled physicians.

In our judgment, this is the best plan that has been presented, and we trust it will receive favorable consideration at the hands of the legislature.

Some problems have arisen in connection with the interchange of insane persons between New Hampshire and other states, especially Massachusetts. The law of New

Hampshire places a heavy penalty upon any one who brings an indigent person into this state who has not already obtained a settlement here. As this necessitates the possession of property upon which taxes have been paid for a period of four years, or the payment of a poll tax for seven years, it follows that some persons who have lived in New Hampshire all their life and have not gone out of the state, may not have secured a settlement. In some instances, towns have made sure that a certain person did not secure a settlement by remitting the taxes. It is doubtful if such cases, under any equitable arrangement that otherwise could be made with a border state, could be returned here without incurring a liability to the penalty of the law.

Nevertheless, this latter point has not been definitely settled in point of law, and is now under consideration by the Attorney General. It is probable, however, that legislation may be necessary in order to make such an arrangement with other states as may be just and equitable.

COMMITMENTS.

1913.

TABLE No. 1.—COMMITMENTS.

Persons Committed to the New Hampshire State Hospital during the year ending August 31, 1913.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of commitment.	Where from.
	Years.	Male.	Female.	Color.	Single, married or widowed.		
Trow, Carrie F.	51	.....	F.	W.	Married	Sept. 4, 1912	Sutton.
Kelley, Irving J.	40	M.	.....	"	"	Sept. 4, 1912	Franklin.
Fleurey, Rosanna	32	.....	F.	"	"	Sept. 5, 1912	Suncook.
Duquette, Leon	18	M.	.....	"	Single	Sept. 5, 1912	Milton.
Perreault, Elmore	30	.....	F.	"	"	Sept. 5, 1912	Somersworth.
Potter, Velruvus	74	M.	.....	"	Widowed	Sept. 5, 1912	Conway.
Rowe, Harry	..	"	.....	"	"	Sept. 6, 1912	Returned from visit.
Kelley, George A.	32	"	.....	"	Married	Sept. 8, 1912	Derry.
Clough, Herbert S.	58	.....	.....	"	"	Sept. 8, 1912	Tamworth.
George, Clara E.	45	.....	F.	"	"	Sept. 9, 1912	Nashua.
Hull, Eugene F.	28	M.	.....	"	"	Sept. 9, 1912	"
Ward, Minnie L.	46	.....	F.	"	"	Sept. 10, 1912	Haverhill.
Wells, Frank E.	51	M.	.....	"	"	Sept. 11, 1912	Claremont.
Biergeil, Mary A.	20	.....	F.	"	Single	Sept. 14, 1912	Franklin.
Carlson, August	..	M.	.....	"	Single	Sept. 16, 1912	Returned from elopement.
Tyler, Rolla D.	36	.....	.....	"	"	Sept. 18, 1912	Exeter.
King, Ida L.	55	.....	F.	"	Single	Sept. 19, 1912	Manchester.
Leggitt, J. Arthur	33	.....	.....	"	Married	Sept. 19, 1912	"
Morse, Sidney	63	M.	.....	"	Widowed	Sept. 19, 1912	Hanover.
King, Frank W.	54	"	.....	"	Married	Sept. 20, 1912	Brookline.
Jackson, Annette H.	54	.....	F.	"	Widowed	Sept. 20, 1912	Nashua.
Barnstein, Emma	42	.....	.....	"	"	Sept. 20, 1912	Colebrook.
Reid, Elizabeth	67	.....	"	"	Single	Sept. 21, 1912	Manchester.
Gould, James P.	40	M.	.....	"	"	Sept. 21, 1912	Brookline.
Gamash, Henry	39	.....	.....	"	Divorced	Sept. 23, 1912	Manchester.
Aldrich, Don H.	53	"	.....	"	Married	Sept. 24, 1912	Whitefield.
Judkins, Caleb M.	54	.....	.....	"	"	Sept. 25, 1912	Warner.

Chase, Dora S	32	.....	F.	V	Married	New York	Sept.	29, 1912	Manchester.
Guild, Elwin E.	44	M.	F.	"	Widowed	New Hampshire ..	Sept.	30, 1912	Claremont.
Mann, Elizabeth	46	M.	F.	"	Single	Scotland	Oct.	1, 1912	Manchester.
Howell, Philip	45	F.	F.	"	Married	Canada	Oct.	2, 1912	Nashua.
Dufour, Ernestine	31	.....	.....	"	Married	Syria	Oct.	3, 1912	Keene.
Dabo, Lizzie C.	30	.....	.....	"	Single	Maine	Oct.	3, 1912	Nashua.
Millett, Joseph C.	73	M.	.....	"	Married	New Hampshire ..	Oct.	4, 1912	Lisbon.
Kay, Leon	37	.....	.....	"	Married	Canada	Oct.	5, 1912	Moultonborough.
Berry, Grace L.	30	M.	F.	"	Widowed	Ireland	Oct.	7, 1912	Coos County Farm.
O'Connell, Dennis	50	M.	F.	"	Married	New Hampshire ..	Oct.	7, 1912	Concord.
Driscoll, Bridget	96	M.	.....	"	Widowed	England	Oct.	7, 1912	Gorham.
Malloy, John W.	44	.....	.....	"	Married	Canada	Oct.	7, 1912	Wilmot.
Whittemore, George W.	87	.....	.....	"	Widowed	New Hampshire ..	Oct.	9, 1912	Plymouth.
Carter, James	59	.....	.....	"	Married	United States	Oct.	9, 1912	Derry.
Pratte, Jack	77	.....	.....	"	Single	New Hampshire ..	Oct.	10, 1912	Efingham.
Butterfield, Leonard D.	56	.....	.....	"	Single	Canada	Oct.	10, 1912	Keene.
Griffin, Lulie M.	31	.....	F.	"	Single	New Hampshire ..	Oct.	11, 1912	Sandwich.
Perry, Fannie F.	62	.....	"	"	Single	United States	Oct.	12, 1912	Manchester.
Prescott, Annie	32	.....	"	"	Single	New Hampshire ..	Oct.	14, 1912	Dover.
Moran, Christopher A.	25	M.	F.	"	Married	Canada	Oct.	14, 1912	Somersworth.
Breton, Ezilda	47	.....	F.	"	Single	New Hampshire ..	Oct.	14, 1912	Holderness.
Fvans, Layonia	27	.....	"	"	Married	Massachusetts	Oct.	14, 1912	Hillsborough.
Taylor, Ellen E.	41	.....	"	"	Widowed	New Hampshire ..	Oct.	16, 1912	Chichester.
Hunkins, Susan P.	75	M.	.....	"	Married	"	Oct.	17, 1912	Richmond.
Page, Everett C.	58	.....	F.	"	Single	"	Oct.	18, 1912	Manchester.
Burke, Catherine	43	M.	F.	"	Married	Ireland	Oct.	19, 1912	Milford.
Howison, William R.	55	.....	F.	"	Widowed	Vermont	Oct.	20, 1912	Manchester.
Kelley, Mary	48	M.	F.	"	Single	Canada	Oct.	24, 1912	Concord.
York, Edward A.	29	M.	.....	"	Married	New Hampshire ..	Oct.	24, 1912	Nashua.
Carron, Francois	75	.....	"	"	Single	Sweden	Oct.	25, 1912	Reed's Ferry (Merrimack).
Hunter, Everett L.	55	.....	.....	"	Married	"	Oct.	26, 1912	Manchester.
Hybsche, John L.	44	.....	F.	"	Widowed	Canada	Oct.	29, 1912	"
Frickson, Anna	45	M.	.....	"	Married	Ireland	Oct.	31, 1912	"
Dupont, Alexander	65	M.	F.	"	Single	United States	Oct.	31, 1912	Walpole.
Riordan, Mary A.	47	M.	.....	"	Widowed	New Hampshire ..	Nov.	1, 1912	Concord.
Chambers, John P.	33	M.	F.	"	Married	Canada	Nov.	2, 1912	Rye.
Drake, Clara M.	59	M.	.....	"	Single	Maine	Nov.	4, 1912	Concord.
Lacasse, Joseph C.	43	.....	F.	"	Married	New Hampshire ..	Nov.	4, 1912	Somersworth.
Faucher, Ulrich	30	.....	.....	"	Single	Maine	Nov.	4, 1912	Concord.
Chisholm, Ethel	25	M.	.....	"	Married	New Hampshire ..	Nov.	5, 1912	Concord.
Ryan, Thomas J.	28	.....	.....	"	Single	Maine	Nov.	6, 1912	Concord.
Sullivan, J. Henry	40	.....	.....	"	Married	New Hampshire ..	Nov.	6, 1912	Warner.
Elliott, Moses A.	79	.....	F.	"	Widowed	Massachusetts	Nov.	7, 1912	Manchester.
Barrett, Sarah	74	.....	.....	"	.....	.....	.....	.....	.....

TABLE No. 1.—Continued.—COMMITMENTS.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of commitment.	Where from.
	Years.	Male.	Female.	Color.	Single, married, or widowed.		
Doucet, Edward.....	36	M.	.....	W	Single.....	Nov. 8, 1912	Manchester.
Codman, Albert O.....	72	"	.....	"	Widowed....	Nov. 8, 1912	Washington.
Sullivan, James.....	42	"	.....	"	Single.....	Nov. 9, 1912	Manchester.
Goodwin, Charles E.....	35	"	.....	"	Married....	Nov. 12, 1912	Gilmanton.
Boudreau, Frank.....	51	.....	F.	"	Single.....	Nov. 12, 1912	Concord.
Chandler, Bertha R.....	23	.....	.....	"	Married....	Nov. 12, 1912	Hopkinton.
Delorier, Dorothy.....	12	.....	.....	"	Single.....	Nov. 13, 1912	Manchester.
Larson, Gustave H.....	43	M.	.....	"	Married....	Nov. 15, 1912	Concord.
Buckley, Andrew.....	30	"	.....	"	Single.....	Nov. 16, 1912	Portsmouth.
Griffin, Philip.....	21	"	.....	"	Single.....	Nov. 16, 1912	Concord.
Andrews, Peter.....	39	.....	.....	"	Married....	Nov. 18, 1912	Wakefield.
Moulton, Mary E.....	70	.....	F.	"	Single.....	Nov. 19, 1912	Rochester.
Adams, Earl W.....	19	M.	.....	"	Widowed....	Nov. 19, 1912	Hudson.
Hobbs, Frances M.....	19	.....	F.	"	Married....	Nov. 19, 1912	Rochester.
Rollins, Sarah J.....	68	.....	.....	"	Single.....	Nov. 20, 1912	Nashua.
Lund, Cora B.....	32	.....	.....	"	Married....	Nov. 20, 1912	Concord.
Paul, Nancy.....	67	.....	.....	"	Single.....	Nov. 21, 1912	Sanbornton.
Brown, Fred M.....	42	M.	.....	"	Single.....	Nov. 23, 1912	Hanover.
Prescott, Jennie.....	30	.....	F.	"	Married....	Nov. 23, 1912	West Stewartstown.
Stewart, Mary.....	63	.....	.....	"	Widowed....	Nov. 26, 1912	Manchester.
Cleveland, Abbie.....	36	.....	.....	"	Married....	Nov. 27, 1912	Concord.
McKee, Agnes.....	63	M.	.....	"	Single.....	Nov. 27, 1912	Barrington.
Racine, Narcisse.....	55	.....	F.	"	Married....	Nov. 28, 1912	Manchester.
Tibbets, Edna M.....	32	.....	.....	"	Single.....	Dec. 1, 1912	Concord.
Rivard, Mary.....	45	M.	.....	"	Married....	Dec. 3, 1912	Returned from elopement.
Aldrich, Smith E.....	19	.....	F.	"	Single.....	Dec. 7, 1912	Concord.
Marchand, Valerme.....	40	M.	.....	"	Married....	Dec. 10, 1912	Concord.
Chapman, John.....	.....	.....	.....	"	.....	.....	.....
Mastoranni, Eletta.....	27	.....	F.	"	Married....	.....	.....

Clifford, Everett.....	16	M.	.....	W.	Single	New Hampshire..	Dec.	10, 1912	Franklin.
Kingsbury, Bertha.....	27	M.	F.	"	Single	New Hampshire..	Dec.	8, 1912	Returned from a visit.
Nolan, William P.....	27	M.	F.	"	Single	Canada	Dec.	11, 1912	Manchester.
Lafond, Mary	18	"	"	"	Married	"	Dec.	12, 1912	Claremont.
Hall, Mary	48	"	"	"	Single	British Columbia.	Dec.	12, 1912	Berlin.
Addelson, David	17	M.	"	"	Single	New Hampshire..	Dec.	12, 1912	Franklin.
Welch, William A.....	31	"	"	"	"	"	Dec.	13, 1912	Rochester.
Carr, Catherine.....	52	"	"	"	Divorced	"	Dec.	14, 1912	Wakefield.
Adlington, Ellen I.....	56	"	"	"	Married	"	Dec.	18, 1912	Bedford.
Patterson, Thomas.....	93	M.	"	"	"	"	Dec.	20, 1912	Stratham.
Edmonds, Andrew J.....	77	"	"	"	"	"	Dec.	21, 1912	Charlestown.
Kendall, Abbie F.....	53	"	"	"	"	Vermont.....	Dec.	23, 1912	Dover.
McIlherin, Ann	70	"	"	"	Single	Ireland	Dec.	26, 1912	Gorham.
Audley, Louise.....	40	"	"	"	Married	Maine	Dec.	26, 1912	Manchester.
Richards, Charles.....	43	M.	"	"	"	England	Dec.	26, 1912	Returned from visit.
Gibson, Elwin J.....	31	"	"	"	Married	Finland	Dec.	30, 1912	Newfields.
Thompson, Anna.....	38	M.	F.	"	"	Vermont.....	Jan.	31, 1912	Walpole.
Farrell, Patrick.....	65	"	"	"	"	Ireland	Jan.	1, 1913	Dover.
Duffey, Mary	50	M.	"	"	"	"	Jan.	2, 1913	Manchester.
Runnells, Harrison.....	60	"	"	"	"	"	Jan.	3, 1913	Wakefield.
Gilman, Mary E.....	45	"	"	"	Single	Nova Scotia	Jan.	3, 1913	Claremont.
Footo, Margaret E.....	36	M.	"	"	Married	New Hampshire..	Jan.	3, 1913	Concord.
Page, Edward D.....	55	"	"	"	Widowed	Ireland	Jan.	3, 1913	Nashua.
O'Connell, Kate	72	M.	"	"	"	New Hampshire..	Jan.	4, 1913	Concord.
Sanborn, Frank.....	39	"	"	"	Married	Canada	Jan.	8, 1913	Manchester.
Goodwin, Calina.....	"	"	"	"	"	"	Jan.	8, 1912	Returned from a visit.
Sullivan, Mary A.....	43	"	"	"	Widowed	New Hampshire..	Jan.	8, 1913	Claremont.
Jones, Minnie A.....	23	M.	"	"	Single	"	Jan.	9, 1913	Nashua.
LaBreche, George.....	20	"	"	"	"	Ireland	Jan.	9, 1913	Concord.
Halpin, Kate.....	26	M.	"	"	"	Vermont.....	Jan.	9, 1913	Portsmouth.
McCrillis, William E.....	52	"	"	"	Widowed	Ireland	Jan.	11, 1913	Dover.
Lynch, Dennis J.....	22	"	"	"	Married	Greece	Jan.	11, 1913	Hanover.
Audriopolas, Chysolas	30	"	"	"	Single	New Hampshire..	Jan.	14, 1913	Nashua.
Davis, Harriet.....	19	"	"	"	"	"	Jan.	14, 1913	"
Delorey, Margaret L.....	75	M.	"	"	Widowed	Canada	Jan.	14, 1913	"
Normandin, Frank.....	42	"	"	"	Married	Maine	Jan.	14, 1913	Concord.
Emery, Frank D.....	33	"	"	"	Single	New Hampshire..	Jan.	15, 1913	Manchester.
Columbe, Delphis.....	21	"	"	"	"	Canada	Jan.	16, 1913	Nashua.
Everett, Alice E.....	34	"	"	"	"	"	Jan.	19, 1913	Conway.
Simard, Paul E.....	33	M.	"	"	Married	New Hampshire..	Jan.	20, 1913	Bethlehem.
Loud, William A.....	48	"	"	"	Single	Canada	Jan.	20, 1913	Bartlett.
Pollock, Obediah.....	30	"	"	"	"	New Hampshire..	Jan.	23, 1913	Returned from elopement.
Nute, Ada G.....	"	"	"	"	"	"	Jan.	"	"
Larsen, Gustave.....	"	M.	"	"	"	"	Jan.	"	"

TABLE NO. 1.—Continued.—COMMITMENTS.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of commitment.	Where from.
	Years.	Male.	Female.	Color.			
Pollock, Margaret.....	48	M.	F.	W.	Scotland.....	Jan. 23, 1913	Newmarket.
Chasse, Eusebe.....	45	M.	F.	"	Canada.....	Jan. 23, 1913	Manchester.
Gurley, Lucy.....	34	M.	F.	"	New Hampshire..	Jan. 24, 1913	
Cilley, George W.....	60	M.	F.	"	Vermont.....	Jan. 24, 1913	Meredith.
Simonds, Almon.....	23	M.	F.	"	New Hampshire..	Jan. 27, 1913	Antrim.
Carr, Angie G.....	48	M.	F.	"	Finland.....	Jan. 28, 1913	Concord.
Mackey, Victor.....	26	M.	F.	"	New Hampshire..	Jan. 30, 1913	Newport.
Blake, Lewis F.....	58	M.	F.	"	Ireland.....	Jan. 30, 1913	Surry.
Dillon, Catherine.....	44	M.	F.	"	Canada.....	Jan. 30, 1913	Manchester.
Gagnon, Horace.....	46	M.	F.	"	Nova Scotia....	Feb. 1, 1913	East Jaffrey.
Poster, Minnie.....	45	M.	F.	"	Canada.....	Feb. 3, 1913	Greenland.
Lavoie, August.....	46	M.	F.	"	New Hampshire..	Feb. 4, 1913	Rochester.
Vallée, George.....	32	M.	F.	"	United States....	Feb. 4, 1913	Manchester.
Leighton, Martha.....	76	M.	F.	"	New Hampshire..	Feb. 4, 1913	Somersworth.
Haynes, Justin.....	72	M.	F.	"	United States....	Feb. 4, 1913	Lancaster.
Goodwin, Walter E.....	40	M.	F.	"	New Hampshire..	Feb. 7, 1913	Peterborough.
Mandigo, Leola B.....	22	M.	F.	"	New Brunswick..	Feb. 8, 1913	Nashua.
Pierce, Edith A.....	48	M.	F.	"	Canada.....	Feb. 10, 1913	Epsom.
Fay, Annie B.....	50	M.	F.	"	Finland.....	Feb. 11, 1913	Concord.
Hassahgram, John.....	39	M.	F.	"	New Hampshire..	Feb. 11, 1913	Troy.
Gordon, Edward A.....	37	M.	F.	"	Massachusetts....	Feb. 13, 1913	Concord.
Holt, Howard A.....	25	M.	F.	"	Massachusetts....	Feb. 14, 1913	Peterborough.
Benton, Sarah M.....	38	M.	F.	"	Vermont.....	Feb. 14, 1913	North Woodstock.
Larsen, Gustave.....	39	M.	F.	"	New Hampshire..	Feb. 19, 1913	Returned from parole.
Sheriden, Charles H.....	48	M.	F.	"	New Hampshire..	Feb. 20, 1913	Berlin.
Farrer, Lily A.....	28	M.	F.	"	New York.....	Feb. 21, 1913	Concord.
Leary, Jennie M.....	24	M.	F.	"	New Hampshire..	Feb. 21, 1913	Portsmouth.
Chiddihy, Lawrence.....	24	M.	F.	"	Canada.....	Feb. 34, 1913	Antrim.
Clair, Samuel J.....	21	M.	F.	"	Canada.....	Feb. 26, 1913	Manchester.

Wright, Henry W.....	25	M.	.....	W.	Single	New Hampshire..	Feb.	26, 1913	Runney.
Dyer, Caroline R.....	28	.....	F.	"	Married	Canada.....	Feb.	28, 1913	Portsmouth.
Desmaris, Rosanna.....	18	.....	"	"	"	New Hampshire..	March	1, 1913	Nashua.
Morrison, Blanche E.....	31	.....	"	"	"	"	March	3, 1913	Portsmouth.
Locke, Arthur L.....	44	M.	.....	"	"	"	March	6, 1913	Madbury.
Lyons, Newman.....	72	"	.....	"	"	"	March	8, 1913	Nashua.
Norris, Brackett.....	43	"	.....	"	"	"	March	10, 1913	Pittsfield.
Messer, Herbert F.....	37	"	.....	"	"	"	March	10, 1913	Hampstead.
Hill, Lena N.....	80	M.	F.	"	Single	"	March	11, 1913	Plaistow.
Guild, Elwin E.....	44	"	.....	"	Married	"	March	12, 1913	Claremont.
LaBel, Joseph.....	17	"	.....	"	Single	"	March	13, 1913	Manchester.
Forsyth, John L.....	57	.....	F.	"	Married	Vermont.....	March	17, 1913	Haverhill.
Kemp, Myra.....	29	.....	"	"	Single	New Hampshire..	March	18, 1913	Manchester.
Talbot, Lillian.....	21	M.	.....	"	Married	Canada.....	March	19, 1913	Whitefield.
Kelley, William R.....	72	.....	F.	"	"	Massachusetts	March	20, 1913	Portsmouth.
St. Germain, George.....	38	M.	.....	"	Married	"	March	20, 1913	Lebanon.
Bailey, Ervin E.....	45	"	.....	"	Single	United States....	March	24, 1913	Hooksett.
McDuffee, Alice C.....	34	.....	F.	"	"	New Hampshire.	March	24, 1913	Hollis.
Lawrence, William A.....	39	M.	.....	"	"	Canada.....	March	24, 1913	Rochester.
Lavoie, Evariste.....	44	"	.....	"	"	Massachusetts	March	27, 1913	Hollis.
Johnson, Alice L.....	28	.....	F.	"	Married	Canada.....	March	27, 1913	Nashua.
Pippin, Georgianna.....	25	.....	"	"	"	New Hampshire..	March	28, 1913	Manchester.
Watson, Albert H.....	43	M.	.....	"	Widowed	"	April	1, 1913	Dover.
Chandler, Elizabeth C.....	61	.....	F.	"	"	Connecticut.....	April	1, 1913	Concord.
Babbitt, John.....	87	M.	.....	"	Married	New Hampshire..	April	2, 1913	Portsmouth Jail.
Eastman, James C.....	55	"	.....	"	"	China.....	April	2, 1913	Nashua.
Lee, Charles.....	70	"	.....	"	Single	Rhode Island.....	April	2, 1913	Derry.
St. Saviour, George.....	23	"	.....	"	"	Canada.....	April	3, 1913	Berlin.
Lanziere, Frank.....	35	"	.....	"	"	New Hampshire..	April	4, 1913	Manchester.
Moody, Charles.....	26	.....	"	"	"	Canada.....	April	4, 1913	Franklin.
Uniac, Mamie.....	41	.....	F.	"	Widowed	Canada.....	April	5, 1913	Campton.
Brow, Corliss.....	62	M.	.....	"	Single	Russia.....	April	5, 1913	Nashua.
Wiseman, Harry.....	16	.....	F.	"	"	New Hampshire..	April	7, 1913	Exeter.
Kreger, Mary.....	20	M.	.....	"	Married	Canada.....	April	9, 1913	Holderness.
Von Telle, Joseph.....	23	"	F.	"	Single	Ireland.....	April	9, 1913	Manchester.
Healey, Ann.....	50	.....	F.	"	"	Canada.....	April	10, 1913	"
Belrose, Peter.....	39	M.	.....	"	Widowed	Massachusetts	April	10, 1913	Candia.
Saunders, Frederick H.....	75	.....	F.	"	"	Ireland.....	April	12, 1913	Concord.
Driscoll, Bridget.....	97	.....	"	"	Married	Vermont.....	April	12, 1913	"
Baker, Helen M.....	74	.....	"	"	Single	Greece.....	April	12, 1913	Penacook.
Adams, Eva.....	19	.....	"	"	"	Canada.....	April	14, 1913	Suncok.
Langlois, Joseph.....	40	M.	.....	"	Married	"	April	14, 1913	Milford.
Bobilee, Mitchell.....	60	.....	.....	"	"	"	April	14, 1913	"

TABLE NO. 1.—Continued.—COMMITMENTS.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of commitment.	Where from.
	Years.	Male.	Female.	Color.			
Boudreau, Frank	29	M.	.....	W.	.....	April 14, 1913	Returned from elopement.
Emer, Sam	29	"	.....	"	Canada	April 16, 1913	Tilton.
Lally, James	38	"	.....	"	United States.....	April 16, 1913	Nashua.
Cheney, Eugene J.	59	"	.....	"	New Hampshire..	April 18, 1913	Concord.
Thompson, Laura E.	61	.....	F.	"	Maine	April 19, 1913	Rochester.
Towne, Mary A.	40	.....	.....	"	Nova Scotia	April 21, 1913	Manchester.
Putney, Frank E.	58	M.	.....	"	New Hampshire..	April 24, 1913	.....
O'Connell, Dennis	52	"	.....	"	Cape Breton.....	April 25, 1913	West Stewartstown.
Parker, John T.	72	.....	.....	"	New Hampshire..	April 26, 1913	Nashua.
Twombly, Georgia E.	44	.....	F.	"	.....	April 27, 1913	New Hampshire.
Chisholm, Ethel	25	.....	.....	"	Maine	April 28, 1913	Maine.
Pike, Viola	22	.....	"	"	New Hampshire..	April 28, 1913	Bridgewater.
Roberts, Daniel	86	M.	.....	"	.....	April 28, 1913	Stark.
Mack, Vienna	67	.....	F.	"	"	April 29, 1913	Gilsum.
Collins, Carrie	42	.....	.....	"	New York	April 29, 1913	Nashua.
Baker, Fred W.	58	M.	.....	"	New Hampshire..	May 1, 1913	Concord.
Labbe, Herminie	49	.....	F.	"	Canada	May 2, 1913	Manchester.
Fox, Asa A.	76	M.	.....	"	New Hampshire..	May 3, 1913	Milton.
Edgeworth, Roland	32	"	.....	"	Ireland	May 4, 1913	Concord.
St. Clair, Regina	32	.....	F.	"	Canada	May 5, 1913	Lebanon.
Meehan, Thomas H.	38	M.	.....	"	New York	May 6, 1913	Dover.
Sullivan, Eva M.	43	M.	.....	"	Nebraska	May 9, 1913	.....
Brady, Patrick	30	.....	.....	"	Ireland	May 6, 1913	Nashua.
Oliver, Irving	57	"	.....	"	United States.....	May 7, 1913	Goffstown.
Brown, Catherine	61	.....	.....	"	Ireland	May 8, 1913	Derry.
Craig, Lora S.	64	.....	.....	"	New Hampshire..	May 8, 1913	Hillsborough.
Craig, Leo E.	40	M.	.....	"	.....	May 8, 1913	.....
Schneider, Elizabeth	47	.....	F.	"	Massachusetts	May 8, 1913	Reed's Ferry.
Gaffney, Thomas F.	38	M.	.....	"	New Hampshire..	May 8, 1913	Nashua.

Desmond, Patrick	48	M.	.....	W.	Divorced	New Hampshire..	May	12, 1913	Manchester.
Thompson, Florence D.....	41	.....	F.	"	Widowed....	"	May	12, 1913	Swansey.
Buckley, Nellie	37	.....	"	"	Single	"	May	13, 1913	Portsmouth.
Cross, Otis E.	35	M.	.....	"	Married	"	May	15, 1913	Bristol.
Horne, Hannah.....	46	.....	F.	"	"	"	May	16, 1913	Wolfeboro.
Walhams, Minnie.....	40	.....	"	"	"	Ireland.....	May	16, 1913	Concord.
Thorning, Hattie D.....	64	.....	"	"	Widowed....	Vermont.....	May	17, 1913	Hudson.
Chealey, Millie A.....	31	M.	.....	"	Married	United States....	May	19, 1913	Exeter.
Marston, Leroy J.....	33	.....	F.	"	"	New Hampshire..	May	20, 1913	Chichester.
Banks, Arline E.....	38	.....	"	"	Widowed....	Italy.....	May	21, 1913	Enfield.
Reed, Isadore S.....	58	.....	"	"	Married	England.....	May	21, 1913	Franklin.
Trovato, Agastino.....	38	M.	.....	"	Single	Canada.....	May	21, 1913	State Prison.
Yarabino, Saverio	45	"	.....	"	"	"	May	21, 1913	"
Underwood, Henry.....	21	"	.....	"	"	England.....	May	21, 1913	"
Gauthier, Albert	29	"	.....	"	"	Canada.....	May	21, 1913	"
Labreche, George.....	..	"	.....	"	"	"	May	22, 1913	"
Bean, Augustus S.....	86	"	.....	"	Widowed....	Massachusetts....	May	23, 1913	Pembroke.
Vallee, George.....	32	"	.....	"	Married	Canada.....	May	25, 1913	Returned from elopement,
McDonald, Daniel	23	"	.....	"	Single	"	May	25, 1913	Concord.
Caswell, George B.....	26	"	.....	"	"	New Hampshire..	May	26, 1913	Somersworth.
Sheridan, Charles H.....	72	.....	F.	"	Widowed....	New Hampshire..	May	27, 1913	North Stratford.
Morey, Sarah C.....	20	M.	.....	"	Single	Canada.....	May	28, 1913	Lebanon.
Chouinard, Xavier.....	25	.....	F.	"	"	United States....	May	29, 1913	Returned from parole.
Johnson, Alice L.....	19	.....	F.	"	Widowed....	England.....	May	29, 1913	Wilnot.
Brulott, Milly	76	M.	.....	"	Single	United States....	May	29, 1913	East Jaffrey.
Andrews, Edward.....	39	.....	F.	"	Widowed....	England.....	May	29, 1913	Nashua.
Davis, Mary.....	69	.....	"	"	Married	United States....	May	30, 1913	Ashland.
Frost, Sarah	54	.....	"	"	"	"	May	31, 1913	Concord.
Byers, Jennie	57	.....	"	"	Married	"	May	31, 1913	Rockingham County Farm.
Messer, Eliza.....	53	.....	"	"	Widowed....	"	May	31, 1913	"
Randall, Annie	46	.....	"	"	Married	"	May	31, 1913	"
Griffin, Ida	61	.....	"	"	Divorced	"	May	31, 1913	"
Tibbetts, Adrianna	49	.....	"	"	Married	"	May	31, 1913	"
Mitchell, Jennie.....	73	.....	"	"	"	"	May	31, 1913	"
Meade, Frances	75	.....	"	"	Single	New Hampshire..	May	31, 1913	"
Roberts, Ann	57	.....	"	"	Married	"	May	31, 1913	"
Canney, Fanny.....	65	.....	"	"	Widowed....	"	May	31, 1913	"
Beede, Annie	53	.....	"	"	Single	"	May	31, 1913	"
Hazelton, Belle	61	.....	"	"	Married	New Hampshire..	May	31, 1913	"
Sleeper, Hattie	53	.....	"	"	Single	"	May	31, 1913	"
Page, Jane	33	.....	"	"	"	"	May	31, 1913	"
Purington, Flora	43	.....	"	"	"	"	May	31, 1913	"
Twombly, Etta	70	.....	"	"	"	"	May	31, 1913	"
Kelliher, Mary.....	..	.....	"	"	"	Ireland	May	31, 1913	"

TABLE NO. 1.—Continued.—COMMITMENTS.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of commitment.	Where from.
	Years.	Male.	Female.	Color.	Single, married or widowed.		
Ellison, Augusta	52	.....	F.	W.	Single	May 31, 1913	Rockingham County Farm.
Boles, George M.	33	M.	.....	.....	Married	June 1, 1913	Londonderry.
Meserve, Arthur	43	"	.....	"	Single	June 1, 1913	Manchester.
Babbitt, John .....	.....	"	.....	"	.....	June 3, 1913	Returned from elopement.
Iszyk, Wicenty	38	"	.....	"	Married	June 3, 1913	Manchester.
Kelley, Edward M.	52	"	.....	"	Widowed	June 5, 1913	Penacook.
Thompson, Anna .....	.....	.....	F.	.....	.....	June 6, 1913	Returned from trial visit.
McDonald, Alexander ..	28	M.	.....	"	Single	June 6, 1913	Plymouth.
Garland, Carrie A.	74	.....	F.	"	Widowed	June 7, 1913	Deerfield.
Dunham, Ruth C.	21	.....	.....	"	Married	June 9, 1913	Keene.
Brouillette, Ernest	25	M.	.....	"	Single	June 10, 1913	Plaistow.
Walker, Jennie	64	.....	F.	"	Divorced	June 11, 1913	Manchester (Hillsborough Co. Farm)
McDonald, Ellen	63	.....	.....	"	Single	June 11, 1913	"
Mead, Anna	40	.....	.....	"	Married	June 11, 1913	"
Richards, Jane	50	.....	.....	"	Single	June 11, 1913	Greenfield,
Richardson, Mary J.	58	.....	.....	"	"	June 11, 1913	"
Richardson, Alvina	56	.....	.....	"	"	June 11, 1913	"
Barrett, Bridgett	37	.....	.....	"	"	June 11, 1913	Manchester.
Boulanger, Mary	29	.....	.....	"	"	June 11, 1913	Greenville.
Gendron, Julia	38	.....	.....	"	"	June 11, 1913	Manchester.
Holt, Clara	38	.....	.....	"	"	June 11, 1913	Greenfield.
Loomis, Laura	40	.....	.....	"	"	June 11, 1913	Bedford.
Towne, Rolinda	63	.....	.....	"	Married	June 11, 1913	Mont Vernon.
Sullivan, Annie	56	.....	.....	"	Widowed	June 11, 1913	Nashua.
Thompson, Mary A.	50	.....	.....	"	.....	June 11, 1913	Manchester.
Barrett, Emma	70	.....	.....	"	Married	June 11, 1913	"
Parker, Lucinda	65	.....	.....	"	Single	June 11, 1913	Windsor.
McLaughlin, Mary	62	.....	.....	"	.....	June 11, 1913	Hillsborough.
Callahan, Mary	53	.....	.....	"	Married	June 11, 1913	Nashua.

Mahoney, Bridget.....	43	.....	F.	W.	Single.....	Ireland.....	June	11, 1913	Nashua,	"
Andrews, Nellie A.....	60	.....	"	"	Married.....	New Hampshire..	June	11, 1913	Hudson,	"
Boetcher, Bertha.....	47	.....	"	"	"	Germany.....	June	11, 1913	Manchester,	"
Cronin, Delia F.....	59	.....	"	"	Widowed.....	Ireland.....	June	11, 1913	"	"
Druker, Hannah J.....	61	.....	"	"	Single.....	Canada.....	June	11, 1913	Amherst,	"
Lombard, Minnie.....	44	.....	"	"	"	New Hampshire..	June	11, 1913	Merrimack,	"
Mullen, Mary.....	67	.....	"	"	"	Ireland.....	June	11, 1913	Greenville,	"
Winn, Mary E.....	37	.....	"	"	Married.....	England.....	June	11, 1913	Nashua,	"
Hall, John.....	60	M.	"	"	"	Ireland.....	June	11, 1913	Manchester,	"
Philbert, Napoleon.....	62	"	"	"	Single.....	Canada.....	June	11, 1913	"	"
Connors, Daniel.....	60	"	"	"	"	Ireland.....	June	11, 1913	"	"
Archibald, Stephen.....	29	"	"	"	"	Nova Scotia.....	June	11, 1913	"	"
Taylor, Albert.....	30	"	"	"	"	United States.....	June	11, 1913	New Boston,	"
Conway, Joseph.....	36	"	"	"	"	New Hampshire..	June	11, 1913	Manchester,	"
Blodgett, George S.....	30	"	"	"	"	"	June	11, 1913	Concord,	"
Gilman, Clarence E.....	50	"	"	"	Married.....	Vermont.....	June	13, 1913	Piermont,	"
Jackson, Elizabeth.....	"	.....	F.	"	"	"	June	19, 1913	Returned from a visit.	"
Caswell, Mary J.....	63	.....	"	"	Widowed.....	New Hampshire..	June	20, 1913	Northwood,	"
Scott, Margaret.....	50	.....	"	"	"	"	June	21, 1913	Portsmouth,	"
Roberts, Ellen.....	85	.....	"	"	"	Ireland.....	June	21, 1913	Manchester,	"
Smith, Vienna.....	74	.....	"	"	"	Canada.....	June	21, 1913	West Stewartstown,	"
Bryant, Jennie.....	33	.....	"	"	Married.....	England.....	June	22, 1913	Keene,	"
Batchelder, Inez.....	31	M.	"	"	"	New Hampshire..	June	24, 1913	Plymouth,	"
Lewis, Peter L.....	28	"	"	"	Single.....	United States.....	June	25, 1913	Laconia,	"
Straw, John E.....	55	"	"	"	Widowed.....	New Hampshire..	June	25, 1913	Hill,	"
Blanchard, William.....	21	"	"	"	Single.....	England.....	June	25, 1913	Pittsfield,	"
Avery, Everett.....	35	"	"	"	"	New Hampshire..	June	25, 1913	Farmington,	"
Ferreira, Dioga.....	29	"	"	"	Married.....	Portugal.....	June	26, 1913	Manchester,	"
Richard, Joseph.....	"	.....	"	"	Single.....	"	June	26, 1913	Nashua,	"
Kugler, Eleanor.....	32	"	F.	"	"	South America.....	June	27, 1913	Berlin,	"
Piper, George W.....	62	M.	"	"	Divorced.....	United States.....	June	27, 1913	Canterbury,	"
Dustin, Eliza A.....	73	"	F.	"	Married.....	New Hampshire..	June	27, 1913	Manchester,	"
Cournier, Flora.....	40	.....	"	"	Single.....	Canada.....	June	29, 1913	Rochester,	"
LaFlam, Peter.....	62	M.	"	"	Married.....	"	June	29, 1913	Penacook,	"
Guilow, Grace.....	28	"	F.	"	"	New Hampshire..	June	30, 1913	Gilsum,	"
Sewall, George F.....	70	M.	"	"	"	"	June	2, 1913	Concord,	"
Carpenter, Catherine.....	74	.....	F.	"	Widowed.....	United States.....	July	2, 1913	Manchester,	"
Lund, Carrie.....	52	.....	"	"	Married.....	Massachusetts.....	July	3, 1913	Hollis,	"
Bliss, Lucy.....	"	.....	"	"	"	"	July	8, 1913	Returned from a visit.	"
Paul, Catherine.....	51	.....	"	"	Married.....	Canada.....	July	7, 1913	Dover,	"
Persons, Beatrice.....	18	.....	"	"	Single.....	New Hampshire..	July	8, 1913	Concord,	"
Blanchard, Zoel.....	42	M.	"	"	Married.....	Canada.....	July	10, 1913	Manchester,	"
Buckley, Thomas.....	40	"	"	"	"	"	July	10, 1913	Weare,	"
Nolan, William.....	28	"	"	"	"	New Hampshire..	July	11, 1913	Manchester,	"

TABLE NO. 1.—Continued.—COMMITMENTS.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of commitment.	Where from.
	Years.	Male.	Female.	Color.			
Cullen, Delia.....	45	M.	F.	W.	Ireland.....	July 11, 1913	Manchester.
Hurley, Albert.....	20	"	"	"	New Hampshire..	July 11, 1913	Peterborough.
Safford, William H.....	27	"	"	"	Vermont.....	July 12, 1913	Berlin.
McNally, Sybil.....	42	"	F.	"	New Hampshire..	July 12, 1913	Berlin.
Pickard, Chester A.....	24	M.	"	"	Massachusetts....	July 11, 1913	New Boston.
Malloy, John W.....	45	"	"	"	New Hampshire..	July 11, 1913	Gorham.
Boymton, Rachel.....	33	"	F.	"	"	July 15, 1913	Hillsborough.
Purmont, Elizabeth.....	53	"	"	"	"	July 15, 1913	Lebanon.
Rock, George.....	56	M.	"	"	Canada.....	July 17, 1913	Ashland.
Plourde, Margaret.....	88	"	F.	"	"	July 17, 1913	Rochester.
Foote, Bridget.....	69	"	"	"	Ireland.....	July 17, 1913	Laconia.
Pike, Chester R.....	25	M.	"	"	United States....	July 17, 1913	Lancaster.
Hobbs, Moses L.....	75	"	"	"	New Hampshire..	July 18, 1913	North Hampton.
Moulton, Bertha L.....	44	"	"	"	"	July 19, 1913	Newport.
Mason, George L.....	65	M.	"	"	Ohio.....	July 19, 1913	Holderness.
Noyes, Margaret E.....	68	"	F.	"	Connecticut.....	July 20, 1913	Manchester.
Rowell, Gertrude A.....	44	"	"	"	England.....	July 21, 1913	Nashua.
Morin, Cédulie.....	31	"	"	"	Canada.....	July 21, 1913	Berlin.
Tucker, William H.....	38	M.	"	"	Maine.....	July 22, 1913	Concord.
Leveque, André.....	66	"	"	"	Canada.....	July 22, 1913	Nashua.
Beede, Fred S.....	16	"	"	"	New Hampshire..	July 24, 1913	Epping.
Ripeau, Rose.....	23	"	F.	"	Canada.....	July 24, 1913	Bow.
Gould, Cynthia.....	66	"	"	"	New Hampshire..	July 25, 1913	Marlow.
Weymouth, Louise M.....	25	"	"	"	"	July 26, 1913	Lyne.
White, Effie M.....	56	"	"	"	"	July 28, 1913	Claremont.
Stevens, Roy M.....	24	M.	"	"	Vermont.....	July 28, 1913	Manchester.
Horne, Augustus.....	80	"	"	"	New Hampshire..	July 29, 1913	Rochester.
Jones, Willoughby.....	22	"	"	"	England.....	July 29, 1913	Berlin.

Clough, Albion.....	60	M.	.....	W.	Married	New Hampshire..	July	29, 1913	Effingham.
Mann, George H.....	65	"	.....	"	Single	United States.....	July	29, 1913	Haverhill..
Barlow, Charles T.....	18	"	F.	"	Divorced	New Hampshire..	July	30, 1913	Exeter.
Whitman, Gertrude.....	41	M.	.....	"	Married	United States.....	July	30, 1913	Nashua.
Hinds, Edward F.....	32	"	.....	"	Single	New Hampshire..	Aug.	2, 1913	Laconia.
Perham, Robert C.....	23	"	.....	"	Married .....	.....	Aug.	2, 1913	Hudson.
Sleeper, Ned S.....	39	"	.....	"	Single	Canada.....	Aug.	1, 1913	Plaistow.
Elliott, Henry P.....	55	"	.....	"	Married	Finland	Aug.	5, 1913	Dover.
LaClair, Charles.....	29	"	.....	"	Single	Italy	Aug.	7, 1913	Newport.
Filippula, John.....	63	"	.....	"	Single	United States.....	Aug.	7, 1913	New Ipswich.
Perrotto, Dominique.....	22	"	F.	"	Widowed	Massachusetts.....	Aug.	7, 1913	Concord.
Gilman, Mary.....	71	M.	.....	"	Single	Canada.....	Aug.	9, 1913	Keene.
Buckminister, William H.....	28	"	.....	"	Married	New Hampshire..	Aug.	10, 1913	State Prison (Manchester.)
Brady, Edward.....	25	"	F.	"	Widowed	United States.....	Aug.	10, 1913	East Jaffrey.
Ouilette, Olsamine.....	35	"	.....	"	Married .....	.....	Aug.	10, 1913	Hanover.
Camp, Bertha E.....	74	M.	.....	"	Single	New Hampshire..	Aug.	11, 1913	Claremont.
Horsington, Lucian.....	76	"	F.	"	Married .....	.....	Aug.	11, 1913	Berry.
Carpenter, Emma G.....	19	"	.....	"	.....	.....	Aug.	12, 1913	Returned from a visit.
Dolloff, Alice.....	65	"	.....	"	.....	New Hampshire..	Aug.	12, 1913	Cheshire County Farm.
Keyes, Louisa.....	50	"	.....	"	Widowed	Canada.....	Aug.	12, 1913	"
Holbrook, Serepta.....	55	"	.....	"	"	New Hampshire..	Aug.	12, 1913	"
Connors, Mary.....	52	"	.....	"	"	.....	Aug.	12, 1913	"
Champney, Rose.....	58	"	.....	"	"	.....	Aug.	12, 1913	"
Amidon, Annie.....	45	"	.....	"	"	.....	Aug.	12, 1913	"
Lovering, Sarah.....	57	"	.....	"	"	.....	Aug.	14, 1913	Londonberry.
Bourdeau, Maggie.....	46	M.	.....	"	Married	United States.....	Aug.	15, 1913	Keene.
Hills, Addie F.....	38	"	F.	"	Single	Ireland	Aug.	15, 1913	Portsmouth.
Carder, Walter S.....	60	M.	.....	"	"	Canada.....	Aug.	18, 1913	Concord.
Wilson, Theresa.....	72	"	F.	"	"	United States.....	Aug.	19, 1913	Mason.
Gillan, James.....	34	M.	.....	"	Married	Ireland	Aug.	25, 1913	Concord.
Wright, Sarah.....	40	"	.....	"	Single	Canada.....	Aug.	25, 1913	Hudson.
Hannigan, Thomas.....	62	M.	.....	"	Married	United States.....	Aug.	26, 1913	Deerfield.
Burneche, Lucie.....	26	"	.....	"	Single	New Hampshire..	Aug.	26, 1913	Portsmouth.
Currier, Fred.....	48	"	F.	"	"	Canada.....	Aug.	26, 1913	New Ipswich.
Johnson, Arthur.....	49	"	.....	"	Single	New Hampshire..	Aug.	27, 1913	Pittsfield.
Roehon, Millie.....	31	M.	.....	"	"	Canada.....	Aug.	28, 1913	Rollinsford.
Royd, Hattie E.....	..	"	F.	"	.....	.....	Aug.	30, 1913	Returned from a visit.
Roy, Philip.....	..	"	.....	"	.....	.....	Aug.	..	..
Carson, Eva.....	..	"	.....	"	.....	.....	Aug.	..	..

Persons committed to the Rockingham County Asylum during the year ending August 31, 1913.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of commitment.	Where from.
	Years.	Male.	Female.	Color.	Single, married or widowed.		
Beede, Annie	65	.....	F.	W.	Widowed ..	May 5, 1895	State Hospital.
Byers, Jennie	54	.....	"	"	Married ..	.....	.....
Currier, Fred	62	M.	.....	"	Single	July 11, 1913	Manchester.
Johnson, Arthur	26	"	.....	"	" .....	Aug. 29, 1913	Portsmouth.
Smith, Bessie	32	.....	F.	"	Married ..	Nov. 18, 1912	Kingston.
Edmonds, Andrew	77	M.	.....	"	" .....	Dec. 1, 1912	Stratham.

Persons committed to the Strafford County Asylum during the year ending August 31, 1913.

McLan, Thomas	48	M.	.....	W.	Single	*May 6, 1913	Dover.

Persons committed to the Belknap County Asylum during the year ending August 31, 1913.

Lewis, Peter	27	M.	W.	Single	June 11, 1913	Laconia.
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Persons committed to the Carroll County Asylum during the year ending August 31, 1913.

None.

• Sent to Concord.

Persons committed to the Merrimack County Asylum during the year ending August 31, 1913.

None.

Persons committed to the Hillsborough County Asylum during the year ending August 31, 1913.

NAME.	AGE, SEX AND CONDITION.						Nationality.	Date of commitment.	Where from.
	Years.	Months.	Days.	Male.	Female.	Color.			
Doucet, Edward.....	36	4	7	M.	.....	W.	French.....	Nov. 3, 1912	Manchester.
McKee, Agnes.....	63	.....	.....	.....	F.	..	Irish.....	Oct. 21, 1912	"
Marchand, Velerine.....	48	10	9	.....	..	..	French.....	Nov. 27, 1912	"
Lafond, Mary.....	18	.....	.....	.....	.....	..	.....	Dec. 9, 1912	"
Richards, Charles.....	45	.....	.....	M.	.....	..	English.....	Dec. 1, 1912	"
Kemp, Myra.....	28	4	9	.....	F.	..	French.....	Feb. 27, 1913	"
Brady, Patrick.....	30	3	.....	M.	.....	..	Irish.....	April 25, 1913	Nashua.
Irzyk, Wicynty.....	38	10	21	..	.....	..	Austrian.....	May 29, 1913	Manchester.
Philbert, Napoleon.....	60	.....	.....	.....	.....	..	French.....	Sept. 4, 1912	"
Towne, Rolinda.....	63	.....	.....	.....	F.	..	American.....	May 27, 1913	Mont Vernon.
Wright, Sarah.....	65	11	14	.....	.....	..	.....	June 9, 1913	Mason.

Persons committed to the Cheshire County Asylum during the year ending August 31, 1913.

None.

Persons committed to the Sullivan County Asylum during the year ending August 31, 1913.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of commitment.	Where from.
	Years.	Male.	Female.	Color.	Single, married or widowed.		
Bugbee, Jerome.....	81	M.	.....	W.	Widowed...	April 12, 1913	Claremont.
Codman, Albert.....	72	.....	.....	..	.....	Sept. 9, 1912	Washington.
Robertson, Laura.....	71	.....	F.	..	Single.....	Jan. 14, 1913	Newport.
Wetherbee, Emma.....	65	.....	.....	..	.....	March 1, 1913	.....
Young, Nathan.....	82	M.	.....	..	.....	March 10, 1913	Sunapee.

Persons committed to the Grafton County Asylum during the year ending August 31, 1913.

None.

Persons committed to the Coös County Asylum during the year ending August 31, 1913.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of commitment.	Where from.
	Years.	Male.	Female.	Color.	Single, married or widowed.		
Smith, Vienna.....	72	.....	.....	W.	.....	May 1, 1912	Stewartstown,
O'Connell, Dennis.....	65	M.	.....	..	.....	April 18, 1913	Colebrook,
McDonald, Daniel.....	23	.....	.....	..	.....	April 21, 1913	North Stratford.

DISCHARGES.

1913.

TABLE NO. 2.—DISCHARGES.

Persons discharged from the New Hampshire State Hospital during the year ending August 31, 1913.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of discharge.	How long at institution.			Condition when discharged.
	Years.	Male.	Female.	Color.	Single, married or widowed.		Years.	Months.	Days.	
Rowe, Harry	22	M.	.....	W.	Single	Sept. 1, 1912	....	...	...	On a visit.
Currier, George A.	72	"	.....	"	Married ..	Sept. 2, 1912	8	7	5	Recovered.
Brown, Jenness	31	M.	F.	"	"	Sept. 3, 1912	3	6	16	Eloped. Improved.
Tibbetts, Edna M.	83	M.	F.	"	Single	Sept. 7, 1912	2	8	21	Much improved.
Weich, John	29	M.	F.	"	"	Sept. 10, 1912	2	4	22	Recovered.
Miller, Elsie B.	16	M.	.....	"	" .....	Sept. 11, 1912	....	...	13	Improved.
Carlson, August	39	"	F.	"	Single	Sept. 11, 1912	....	2	9	Eloped.
Wiseman, Harry	45	"	"	"	Married ..	Sept. 18, 1912	3	10	13	Improved.
Davis, Lizzie	52	"	"	"	Single	Sept. 18, 1912	2	9	30	Recovered.
Taylor, Elizabeth A.	38	"	"	"	"	Sept. 18, 1912	8	5	16	Recurrent recovery.
Clement, Helen	55	M.	.....	"	" .....	Sept. 20, 1912	4	4	6	Recovered.
Janelle, Elinore	30	"	F.	"	"	Sept. 21, 1912	2	3	11	Much improved.
Nelson, William	24	"	"	"	Married ..	Sept. 23, 1912	....	6	19	Recovered.
Boisvert, Phebe	34	"	"	"	Single	Sept. 24, 1912	....	2	30	[covered. On trial. Did not return. Re-
Johnson, Grace	28	M.	.....	"	Married ..	Sept. 26, 1912	....	3	11	Recovered.
Wilbur, Bridget	30	"	F.	"	"	Oct. 11, 1912	....	1	3	" from alcoholism.
Hull, Eugene F.	43	"	"	"	"	Oct. 12, 1912	2	5	5	"
Morin, Cadulie	24	"	"	"	"	Oct. 14, 1912	3	1	5	[not return. On trial. Did
Heath, Mary J.	55	"	"	"	Single	Oct. 15, 1912	....	10	13	Not improved. On trial. Did
Chisholm, Ethel	32	M.	.....	"	" .....	Oct. 18, 1912	....	...	29	Improved.
King, Ida L.	73	"	"	"	Married ..	Oct. 18, 1912	....	...	19	Much improved.
Chase, Dora S.	43	"	"	"	"	Oct. 21, 1912	....	2	5	Recovered.
Bennett, Henry	48	"	"	"	"	Oct. 22, 1912	....	1	26	"
Verture, George	27	M.	F.	"	Single	Oct. 22, 1912	....	2	6	Eloped. Recovered.
Le May, Calixte	50	"	"	"	Married ..	Oct. 23, 1912	....	6	1	Not improved. [return. On trial. Did not
Laberge, Ardell	27	M.	.....	"	" .....	Oct. 24, 1912	....	2	8	Improved. On trial. Did not
Ham, Evans	50	M.	.....	"	" .....	Oct. 24, 1912	....	...	...

	M.	W.		Married	New Hampshire	Oct.	25, 1912	2	18	
Copp, William P.	56	.....	.....	Single	New Hampshire	Oct.	31, 1912	11	9	Not insane.
O'Connor, William L.	34	.....	.....	Married	"	Nov.	2, 1912	.....	26	Not improved from alcoholism.
Malloy, John W.	44	.....	.....	Single	Vermont	Nov.	6, 1912	.....	13	Much improved.
York, Edward A.	29	.....	.....	Married	New York	Nov.	7, 1912	8	20	Recovered.
Scott, Annie	31	F.	.....	.....	Canada	Nov.	8, 1912	7	8	"
Dejardin, Virginia	40	.....	.....	Single	New Hampshire	Nov.	11, 1912	3	...	Not improved.
Hodgins, Bertha	17	.....	.....	Widowed	Ireland	Nov.	12, 1912	1	5	Recovered.
Driscoll, Bridget	96	.....	.....	Single	Canada	Nov.	15, 1912	1	12	Not improved.
Dufour, Ernestine	31	.....	.....	Widowed	Scotland	Nov.	17, 1912	1	16	"
Mann, Elizabeth	46	.....	.....	Married	Canada	Nov.	20, 1912	1	11	Recovered from alcoholism.
Pratte, Jack	77	M.	.....	.....	"	Nov.	21, 1912	2	3	Much improved.
Leggett, J. Arthur	33	.....	.....	"	"	Nov.	24, 1912	5	10	Recovered. [not return.
Brackett, Ida	40	F.	.....	Single	New Hampshire	Nov.	25, 1912	1	2	Not improved. On parole. Did
Jacques, George	33	M.	.....	Single	"	Nov.	27, 1912	.....	.....	On a visit.
Kingsbury, Bertha A.	...	F.	.....	Single	Austria	Nov.	29, 1912	2	15	Not improved. [ism.
Burgell, Mary A.	20	.....	.....	Single	New Hampshire	Nov.	30, 1912	.....	26	Recovered from acute alcohol-
Lacasse, Joseph C.	43	M.	.....	Married	Ireland	Nov.	3, 1912	6	8	Improved. {proved.
Phillips, Mary	85	F.	.....	Widowed	New Hampshire	Dec.	4, 1912	2	4	Did not return. On trial Im-
Guild, Elwin	44	M.	.....	Married	"	Dec.	6, 1912	.....	...	Eloped.
Chapman, John	...	.....	.....	Married	New Hampshire	Dec.	7, 1912	3	2	Recurrent recovery.
Fleurey, Rosanna	32	F.	.....	Single	"	Dec.	7, 1912	3	15	Recov'd from acute alcoholism.
Nolan, William P.	26	M.	.....	Single	"	Dec.	9, 1912	2	7	"
Howell, Phillip	45	.....	.....	"	United States	Dec.	9, 1912	1	8	"
Chambers, John P.	33	.....	.....	Married	Mississippi	Dec.	13, 1912	.....	27	Not improved.
Griffin, Phillip	21	.....	.....	Single	New Hampshire	Dec.	13, 1912	4	7	Recovered. [Much improved.
Lemrey, Edith	25	F.	.....	Single	Vermont	Dec.	15, 1912	8	26	On parole. Did not return.
Watts, Leland	22	.....	.....	Widowed	New Hampshire	Dec.	17, 1912	3	26	Much improved.
Sawyer, Daniel J.	63	.....	.....	Single	Cape Breton	Dec.	21, 1912	2	14	Recovered from alcoholism.
O'Connell, Dennis	50	.....	.....	.....	"	Dec.	21, 1912	.....	...	On parole.
Gibson, Elwin J.	...	.....	.....	Single	Poland	Dec.	21, 1912	6	4	Eloped. Not improved.
Christian, John	31	.....	.....	Married	Ireland	Dec.	22, 1912	8	14	Not improved.
Ahern, Margaret	41	F.	.....	Single	New Hampshire	Dec.	23, 1912	7	14	Eloped. Improved.
Merrill, Herbert	39	M.	.....	Single	"	Dec.	23, 1912	1	19	Not insane.
Kay, Leon	37	.....	.....	.....	"	Dec.	24, 1912	.....	...	On a visit.
Sullivan, Mary	...	F.	.....	Single	New Hampshire	Dec.	29, 1912	.....	29	Improved.
Aldrich, Smith E.	19	M.	.....	Married	"	Dec.	29, 1912	7	30	Much improved.
Batchelder, John F.	61	.....	.....	Single	Canada	Jan.	1, 1913	1	7	Improved.
Marchaud, Velerne	40	F.	.....	Married	Maine	Jan.	10, 1913	1	5	"
Abbott, Charles	49	M.	.....	Married	Vermont	Jan.	12, 1913	1	1	"
Stewart, Mary	63	F.	.....	Single	New York	Jan.	14, 1913	1	19	Much improved.
Jackson, Annette H.	54	.....	.....	Married	"	Jan.	19, 1913	3	30	Eloped.
Larsen, Gustave H.	...	M.	.....	Single	New Hampshire	Jan.	20, 1913	6	14	Not improved.
Frye, Lizzie O.	37	F.	.....	Single	Ireland	Jan.	20, 1913	1	8	Recovered from alcoholism.
McCrillis, William E.	26	M.	.....	.....	"	Jan.	17, 1913	.....	...	"

TABLE NO. 2.—Continued.—DISCHARGES.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of discharge.	How long at institution.			Condition when discharged.
	Years.	Male.	Female.	Color.	Single, married or widowed.		Years.	Months.	Days.	
Duffy, Mabel	40	.....	F.	W.	Married ..	Jan. 17, 1913	...	3	26	Much improved.
Nutter, Annie A.	50	.....	.....	.....	.....	Jan. 22, 1913	1	5	22	Made permanent discharge. On a visit. Recovered.
Mason, Charles A.	27	M.	.....	.....	Single ..	Jan. 23, 1913	1	11	24	Improved. Recovered. [ism.
Goodwin, Calina.	39	.....	F.	.....	Married ..	Jan. 24, 1913	.....	.....	16	Recovered from acute alcohol-
Lehmann, Frederick W. .	21	M.	.....	.....	Single ..	Jan. 27, 1913	.....	8	28	Not improved. [ism.
Lafond, Mary.	18	.....	F.	.....	.....	Feb. 3, 1913	.....	1	22	Did not return. Improved. Pa- roled for two weeks.
Brigham, Harry S.	43	M.	.....	.....	Married ..	Feb. 3, 1913	.....	6	23	Improved.
Emery, Frank D.	42	.....	.....	.....	.....	Feb. 4, 1913	.....	.....	21	Recov'd from acute alcoholism.
Colombe, Delphis	33	.....	.....	.....	Single ..	Feb. 4, 1913	.....	.....	20	.....
Page, Edward D.	36	.....	.....	.....	Married ..	Feb. 7, 1913	.....	1	4	.....
Larsen, Gustave. ....	.....	.....	.....	.....	.....	Feb. 13, 1913	.....	.....	.....	.....
Atwood, Marion.	34	.....	.....	.....	Married ..	Feb. 13, 1913	.....	.....	.....	On parol.
Collins, Margaret M.	29	.....	.....	.....	Single ..	Feb. 15, 1913	.....	8	14	Recovered.
Davis, Harriett	30	.....	.....	.....	.....	Feb. 16, 1913	5	3	15	Eloped. Dis. Rec. recovery.
Lynch, Dennis J.	52	.....	.....	.....	Widowed ..	Feb. 16, 1913	.....	1	2	.....
Valle, George	32	M.	.....	.....	Married ..	Feb. 25, 1913	.....	1	14	Not improved. [ism.
Butterfield, Leonard D. .	56	.....	.....	.....	.....	Mar. 1, 1913	.....	4	21	Recovered from acute alcohol-
Brown, Susan J.	40	.....	.....	.....	.....	Mar. 1, 1913	3	8	11	Much improved.
Cleveland, Abbie	36	.....	F.	.....	.....	Mar. 9, 1913	.....	3	11	Recovered.
Nute, Ada G.	30	.....	.....	.....	Single ..	Mar. 10, 1913	.....	1	18	.....
Kingsbury, Bertha A.	21	.....	.....	.....	.....	Mar. 12, 1913	.....	10	9	.....
Carr, Angie G.	48	.....	.....	.....	Married ..	Mar. 13, 1913	.....	1	13	Much improved.
Farrer, Lily A.	48	.....	.....	.....	.....	Mar. 19, 1913	.....	.....	27	Recovered.
Ferrare, Daniel J.	22	M.	.....	.....	Single ..	Mar. 20, 1913	1	4	5	.....
Leary, Jennie M.	28	.....	F.	.....	.....	Mar. 24, 1913	.....	1	3	[ism. from acute alcohol-
Kelley, William R.	72	M.	.....	.....	.....	Mar. 26, 1913	.....	.....	7	Not improved.
Simonds, Almon	23	.....	.....	.....	.....	Mar. 27, 1913	.....	2	...	Not insane.

No.	Name	Sex	Age	Married	Place	Date	Remarks
38	Coleman, Frank	M.	...	W.	...	...	...
28	Dyer, Caroline R.	F.	...	Single	...	...	...
24	Roberts, William R.	M.	...	Married	...	...	...
44	Hybsche, John L.	"	...	...	...	...	...
30	Dabo, Lizzie C.	F.	...	Single	...	...	...
19	Adams, Earl W.	M.	...	Single	...	...	...
55	Boudreau, Frank	"	...	Married	...	...	...
22	Howison, William R.	"	...	Single	...	...	...
25	Mandigo, Leola B.	F.	...	Married	...	...	...
48	Chisholm, Ethel	"	...	...	...	...	...
47	Pierce, Edith A.	M.	...	Widowed	...	...	...
62	Brow, Corliss	"	...	Married	...	...	...
40	Willis, Frank E.	"	...	Single	...	...	...
48	Kelley, Irving J.	"	...	Married	...	...	...
48	Pollock, Obadiah	"	...	Single	...	...	...
70	Moulton, Mary E.	F.	...	Single	...	...	...
25	Haddad, Redwood	M.	...	Single	...	...	...
29	Emer, Sam	"	...	Single	...	...	...
35	Lauiere, Frank	"	...	Single	...	...	...
43	Norris, Brackett	"	...	Married	...	...	...
46	Brown, Harry	"	...	Single	...	...	...
59	Cheney, Eugene J.	"	...	Married	...	...	...
25	Johnson, Alice L.	F.	...	Single	...	...	...
27	Ginakis, Peter	M.	...	Single	...	...	...
36	Goodwin, Charles E.	"	...	Single	...	...	...
58	Baker, Fred W.	"	...	Married	...	...	...
75	Tredick, Julia A.	F.	...	Single	...	...	...
39	Hassalgram, John	M.	...	Married	...	...	...
22	Andriopolas, Chysolas	F.	...	Single	...	...	...
32	Edgeworth, Roland	M.	...	Married	...	...	...
19	Adams, Eva	F.	...	Single	...	...	...
44	Howe, John C.	M.	...	Married	...	...	...
42	La Breche, George	"	...	Single	...	...	...
23	Brown, Fred M.	"	...	Married	...	...	...
40	Von Telle, Joseph	F.	...	Single	...	...	...
40	Walkams, Minnie	"	...	Married	...	...	...
40	Audley, Louise	"	...	Single	...	...	...
...	Sheriden, Charles H.	M.	...	Single	...	...	...
...	Babbitt, John	"	...	Single	...	...	...
...	Thompson, Anna	"	...	Single	...	...	...
33	Bales, George M.	F.	...	Married	...	...	...
43	Pike, James O.	"	...	Single	...	...	...

TABLE NO. 2.—Continued.—DISCHARGES.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of discharge.	How long at institution.			Condition when discharged.
	Years.	Male.	Female.	Color.	Single, married or widowed.		Years.	Months.	Days.	
Desmaris, Rosanna.....	18	...	F.	W.	Married..	June	...	3	7	Recovered.
Blake, William.....	44	M.	...	"	Divorced..	June	16	10	11	Eloped. Not improved.
Jackson, Elizabeth.....	38	M.	F.	"	"	June	...	...	...	On a visit. [ism.
Iszyk, Wicenty.....	48	...	...	"	Married..	June	...	...	...	Recovered from acute alcohol-
Eastman, Josiah B.....	21	...	F.	"	Single	June	11	9	19	Much improved.
Talbot, Lillian.....	52	...	"	"	"	June	...	2	30	Improved. [Not improved.
Carr, Catherine.....	31	...	"	"	Married..	June	...	6	3	Did not return. On parole.
Morrison, Blanche.....	58	M.	...	"	"	June	...	3	20	Recovered.
Putney, Frank E.....	38	"	...	"	Single	June	...	1	28	" from acute alcohol-
Meehan, Thomas H.....	27	"	...	"	"	June	...	6	12	Improved.
Nolan, William P.....	45	M.	F.	"	"	June	...	5	22	Not improved.
Foot, Margaret.....	70	...	F.	"	Married..	June	...	2	24	Much improved.
Eastman, James C.....	...	M.	...	"	"	June	...	...	...	On a visit.
Bliss, Lucy.....	32	M.	...	"	Single	July	9	11	11	Did not return. On a visit. Im-
Rowe, Harry.....	44	"	F.	"	Married..	July	...	4	...	Improved.
Guild, Elwin E.....	42	...	"	"	"	July	...	2	13	Recovered. [not return.
Collins, Carrie.....	35	...	"	"	Single	July	...	6	26	Improved. On a visit. Did
Bryant, Jennie.....	34	M.	...	"	Married..	July	...	...	...	Much improved.
Everett, Alice A.....	62	"	...	"	Single	July	...	...	...	Improved.
Piper, George W.....	28	...	F.	"	Married..	July	...	...	...	Recovered from alcoholism.
McDonald, Alexander.....	38	"	...	"	Widowed..	July	...	...	...	Improved.
Tucker, William H.....	43	...	F.	"	"	July	...	2	21	On a visit. [ism.
Sullivan, Eva.....	...	M.	...	"	Married..	Aug.	...	...	...	Recovered from acute alcohol-
Gilman, Mary.....	56	...	F.	"	"	Aug.	...	...	...	On a visit.
Rock, George.....	38	M.	...	"	Single	Aug.	...	...	...	Much improved.
Dolloff, Alice A.....	32	"	...	"	Married..	Aug.	...	...	...	Recovered from acute alcohol-
Lahey, Michael.....	...	...	F.	"	Single	Aug.	...	9	22	Much improved.
Hinds, Ed. F.....	...	...	F.	"	"	Aug.	...	...	...
Burke, Catherine.....	44	...	F.	"	Single	Aug.	...	...	...

No.	Name	W.	M.	Married	Italy	Aug.	9, 1913	2	19	Recovered.	Trans'd to prison
38	Trovato, Agostino	..	..	Single	Italy	Aug.	9, 1913	...	5	Recov'd from acute alcoholism.	
22	Perrotto, Dominique	..	..	Single	"	Aug.	12, 1913	...	5	"	
44	Rowell, Gertrude	F.	..	Married	England	Aug.	13, 1913	...	23	"	
52	Kelley, Edward M.	..	M.	Widowed	New Hampshire	Aug.	13, 1913	...	2	"	
51	Paul, Catherine	F.	..	Married	Canada	Aug.	15, 1913	...	1	Recovered.	
52	Lund, Carrie	..	..	Married	Massachusetts	Aug.	16, 1913	...	1	Improved.	
16	Wiseman, Harry	..	M.	Single	Russia	Aug.	18, 1913	...	4	Recovered.	
63	Caswell, Mary J.	F.	..	Widowed	New Hampshire	Aug.	20, 1913	...	2	"	
62	McIntire, Hattie E.	..	..	Married	"	Aug.	20, 1913	7	4	Not improved.	
45	Yaravino, Saverino	..	M.	Single	Italy	Aug.	21, 1913	...	3	Recovered.	Trans'd to prison.
29	LaClair, Charles	..	..	..	Canada	Aug.	21, 1913	...	16	Recov'd from acute alcoholism.	
..	Corson, Eva	F.	..	..	"	Aug.	22, 1913	...	..	On a visit.	
42	Blanchette, Zoel	..	M.	..	Canada	Aug.	23, 1913	...	1	Recovered from acute alcoholism.	
40	Cournier, Flora	F.	..	Married	"	Aug.	23, 1913	...	1	Improved.	
29	Brown, Lillian	..	..	"	New Hampshire	Aug.	25, 1913	3	21	Recovered.	
65	Mason, George L.	..	M.	"	Ohio	Aug.	26, 1913	...	1	Not improved.	

Persons discharged from the Rockingham County Asylum during the year ending August 31, 1913.

[illegible]

TABLE NO. 2.—Continued.—DISCHARGES.

Persons discharged from the Strafford County Asylum during the year ending August 31, 1913.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of discharge.	How long at institution.			Condition when discharged.
	Years.	Male.	Female.	Color.	Single, married or widowed.		Years.	Months.	Days.	
Meehan, Thomas.....	48	M.	.....	W.	Single	Irish.....	Aug. 2, 1913	....	*	Recovered.

Persons discharged from the Belknap County Asylum during the year ending August 31, 1913.

Lewis, Peter.....	27	M.	W.	Single	American.....	June 26, 1913	16	Morose. Stupid.
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Persons discharged from the Carroll County Asylum during the year ending August 31, 1913.

Abbott, Irving	37	M.	W.	Single	American.....	Aug. 30, 1913	†	Quite well.
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Persons discharged from the Merrimack County Asylum during the year ending August 31, 1913.

None.

* 30 days here. Also at Concord.

† About two years.

TABLE NO. 2.—Continued.—DISCHARGES.

Persons discharged from the Hillsborough County Asylum during the year ending August 31, 1913.—Continued.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of discharge.	How long at institution.			Condition when discharged.
	Years.	Male.	Female.	Color.			Years.	Months.	Days.	
Mead, Anna.....	40	.....	F.	W.	American.....	June 11, 1913	13	9	18	Transferred to State Hospital.
Parker, Lucinda.....	65	.....	.....	.....	.....	June 11, 1913	35	9	6	..
Philbert, Napoleon.....	61	M.	.....	.....	French.....	June 11, 1913	18	9	7	..
Richards, Jane.....	50	.....	F.	.....	American.....	June 11, 1913	11	9	11	..
Richardson, Mary J.....	58	.....	.....	.....	.....	June 11, 1913	39	11	9	..
Richardson, Alvina.....	56	.....	.....	.....	.....	June 11, 1913	41	2	15	..
Towne, Rolinda.....	63	.....	.....	.....	.....	June 11, 1913	.....	.....	14	..
Taylor, Bert.....	30	M.	.....	.....	.....	June 11, 1913	6	4	5	..
Walker, Jennie.....	64	.....	F.	.....	.....	June 11, 1913	13	8	10	..
Wright, Sarah.....	66	M.	.....	.....	.....	Aug. 19, 1913	13	2	10	..
<i>Persons discharged from the Cheshire County Asylum during the year ending August 31, 1913.</i>										
Amidon, Annie.....	54	.....	F.	W.	Swede.....	Aug. 12, 1913	12	6	25	Transferred to State Hospital.
Bordeau, Maggie.....	37	.....	.....	.....	French.....	Aug. 12, 1913	3	5	26	..
Connors, Mary M.....	71	.....	.....	.....	Irish.....	Aug. 12, 1913	3	6	25	..
Holbrook, Scepta J.....	65	.....	.....	.....	American.....	Aug. 12, 1913	31	3	15	..
Keyes, Louisa M.....	52	.....	.....	.....	English.....	Aug. 12, 1913	9	9	13	..
Lovering, Sarah A.....	66	.....	.....	.....	American.....	Aug. 12, 1913	13	11	17	..
Champney, Rose.....	59	.....	.....	.....	French.....	Aug. 12, 1913	2	11	27	..

DEATHS.

1913.

TABLE NO. 3.—DEATHS.

Persons who died at the New Hampshire State Hospital during the year ending August 31, 1913.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of death.	Cause of death.
	Years.	Male.	Female.	Color.	Single, married or widowed.		
Lyons, Ellen	53	.....	F.	W.	Widowed..	Sept. 2, 1912	Exhaustion in involuntary melancholia.
Beatty, Roland	22	M.	.....	.....	Single	Sept. 3, 1912	Pulmonary tuberculosis.
Driscoll, Jeremiah .....	..	.....	.....	.....	Married ..	Sept. 11, 1912	Enterocolitis.
Hawes, Alice	46	.....	F.	.....	.....	Sept. 12, 1912	Chronic interstitial nephritis.
Hurlburt, William E.	51	M.	.....	.....	.....	Sept. 12, 1912	Huntington's chorea.
Trefethen, Martin P.	55	..	.....	.....	Single	Sept. 13, 1912	Cerebral hemorrhage.
Hale, Charles	39	..	.....	.....	.....	Sept. 14, 1912	Exhaustion in dementia præcox.
Mathews, Charlotte A.	71	.....	F.	.....	Widowed..	Sept. 16, 1912	Exhaustion in senile dementia.
Hutchinson, Justin E.	74	M.	.....	.....	.....	Sept. 16, 1912	Broncho pneumonia.
Marthier, Jacques	75	..	.....	.....	Single	Sept. 17, 1912	Chronic interstitial nephritis.
Kelley, George A.	32	..	.....	.....	Married ..	Sept. 17, 1912	Broncho pneumonia and acute alcoholism.
Gadbois, Leo	35	..	.....	.....	.....	Sept. 18, 1912	Exhaustion in dementia præcox.
Ring, Adaline F.	69	.....	F.	.....	Single	Sept. 26, 1912	Enterocolitis.
Philbrick, John	35	M.	.....	.....	.....	Sept. 27, 1912	Paresis.
Crosby, Benjamin	59	..	.....	.....	Married ..	Sept. 28, 1912	Intestinal hemorrhage in typhoid fever.
King, Frank W.	54	..	.....	.....	.....	Sept. 28, 1912	Exhaustion in acute mania.
Cummings, Lydia S.	51	.....	F.	.....	.....	Oct. 4, 1912	Edema of lungs.
Wentworth, Sherman.	42	M.	.....	.....	Single	Oct. 4, 1912	Exhaustion in dementia.
Quimby, Fred L.	54	..	.....	.....	Married ..	Oct. 6, 1912	Typhoid fever.
Judkins, Caleb M.	63	..	.....	.....	Widowed..	Oct. 8, 1912	Cerebral hemorrhage.
Morse, Sidney	82	..	.....	.....	.....	Oct. 9, 1912	Arteriosclerosis.
McKee, Thomas	77	..	.....	.....	Married ..	Oct. 10, 1912	Exhaustion in senile dementia.
Floyd, Jonathan E.	53	.....	F.	.....	.....	Oct. 10, 1912	Exhaustion in melancholia.
Hodgerney, I. Belle	47	M.	.....	.....	.....	Oct. 15, 1912	Paresis.
Griffin, Charles H.	56	..	.....	.....	Widowed..	Oct. 16, 1912	Pneumonia.
Knapp, George	68	..	.....	.....	Married ..	Oct. 16, 1912	Exhaustion in senile dementia.
Vaugeois, Frank .....	..	..	.....	.....	.....	..	..

Woodbury, Charles H.....	64	M.	..	W.	Married ..	New Hampshire	Oct.	16, 1912	Cerebral hemorrhage.
Gamash, Henry	39	"	..	"	Single	Canada	Oct.	18, 1912	Exhaustive psychosis.
Page, Everett C.	58	"	..	"	Married ..	New Hampshire	Oct.	21, 1912	Chronic interstitial nephritis.
Glasco, Lavinia	62	"	F.	"	Single	Canada	Oct.	31, 1912	Dysentery and enteritis.
O'Brien, Margaret	45	"	"	"	"	New Hampshire	Nov.	5, 1912	Infective diarrhoea.
Barber, Lydia	79	"	"	"	Widowed..	"	Nov.	6, 1912	Exhaustion in senile dementia.
Sanborn, Melvin E.	40	M.	..	"	Single	"	Nov.	6, 1912	Chronic diffuse nephritis.
Trumbull, Helen	75	"	F.	"	Widowed..	"	Nov.	15, 1912	Fracture of femur.
Hunkins, Susan P.	75	"	"	"	"	"	Nov.	16, 1912	Mitral insufficiency.
Berry, Grace L.	30	"	"	"	Married ..	"	Nov.	25, 1912	Exhaustion in dementia præcox.
Carter, Nathan M.	78	M.	..	"	"	Massachusetts ..	Dec.	3, 1912	Cerebral hemorrhage.
Barrett, Sarah	74	"	"	"	Widowed..	New Hampshire	Dec.	4, 1912	Epileptic convulsions.
Paul, Nancy	67	"	F.	"	Married ..	"	Dec.	4, 1912	Valvular disease of heart.
Potter, Velruvus	74	M.	..	"	Widowed..	"	Dec.	5, 1912	Apoplexy.
Millett, Joseph C.	73	"	"	"	Married ..	Maine	Dec.	5, 1912	Dysentery and enteritis.
Perry, Harlow C.	37	"	"	"	Single	New Hampshire	Dec.	5, 1912	Uremic convulsions.
Richard, Cora	20	"	F.	"	"	Canada	Dec.	6, 1912	Epilepsy.
Racine, Narcisse	55	M.	..	"	Married ..	"	Dec.	14, 1912	Chronic diffuse nephritis.
Marquis, Joseph	32	"	"	"	Single	"	Dec.	14, 1912	Peritonitis.
Still, Jesse	41	"	"	"	"	New York	Dec.	14, 1912	Dysentery and enteritis.
McGillivray, Alice M.	50	"	"	"	Married ..	Canada	Dec.	29, 1912	Diarrhoea and enteritis.
Bennett, Aaron	25	M.	F.	"	Single	Russia	Dec.	31, 1912	Tuberculosis of lungs.
McAnn, James D.	59	"	"	"	Widowed..	Massachusetts ..	Jan.	2, 1913	Exhaustion in senile dementia.
Blood, Charles C.	65	"	"	"	"	New Hampshire	Jan.	5, 1913	Tuberculosis of lungs.
Hall, Mary	48	"	F.	"	Married ..	Canada	Jan.	5, 1913	Exhaustion in involutional melancholia.
Kelley, Mary	48	"	"	"	Widowed..	Ireland	Jan.	7, 1913	Diarrhoea and enteritis.
Pattison, Thomas	93	M.	..	"	Married ..	New Hampshire	Jan.	10, 1913	Arteriosclerosis.
Connors, Mary	65	"	"	"	Widowed..	Ireland	Jan.	12, 1913	Fracture of femur.
Farrell, Patrick	38	M.	F.	"	Married ..	Vermont	Jan.	13, 1913	Chronic interstitial nephritis.
Webster, McKnabb	58	"	"	"	"	"	Jan.	15, 1913	"
Prescott, Jennie	30	"	F.	"	Single	United States..	Jan.	14, 1913	Dysentery and enteritis.
Hayes, Martha D.	86	"	"	"	"	New Hampshire	Jan.	20, 1913	Exhaustion in senile dementia.
Fernald, Mary	70	"	"	"	Widowed..	"	Jan.	20, 1913	Chronic interstitial nephritis.
Howard, Annie (correct name, Heath, Ada M.) ..	33	"	"	"	Married ..	Massachusetts ..	Jan.	27, 1913	Enterocolitis.
Odeth, Sam	69	M.	..	"	"	Canada	Jan.	27, 1913	Exhaustion in senile dementia.
Edmonds, Andrew J.	77	"	"	"	"	New Hampshire	Jan.	27, 1913	Erysipelas of face.
Whittemore, George W.	87	"	"	"	"	"	Feb.	1, 1913	Pneumonia (passive).
Pollock, Margaret	48	"	F.	"	Single	Scotland	Feb.	1, 1913	Exhaustion in acute mania.
Jones, Alfred W.	64	M.	"	"	Married ..	Massachusetts ..	Feb.	5, 1913	Suicide by asphyxia.
Bowen, Allyn G.	48	"	"	"	Divorced..	United States..	Feb.	5, 1913	Facial erysipelas.
Maudeville, John R.	41	"	"	"	Single	New Hampshire	Feb.	6, 1913	Exhaustion in epileptic dementia.
Codman, Albert O.	72	"	"	"	Widowed..	"	Feb.	6, 1913	Exhaustion in senile dementia.
Drake, Clara M. ....	..	"	F.	"	"	"	Feb.	8, 1913	Exhaustion in melancholia.

TABLE NO. 3.—Continued.—DEATHS.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of death.	Cause of death.
	Years.	Male.	Female.	Color.			
Cilley, George W.	60	M.	.....	W.	Vermont	Feb. 13, 1913	Facial erysipelas.
Hoyt, Levi F.	70	"	.....	"	New Hampshire.	Feb. 14, 1913	Cerebral hemorrhage.
Benton, Sarah M.	38	"	F.	"	Massachusetts...	Feb. 24, 1913	Exhaustion in involuntional melancholia.
Moran, Christopher A. ...	25	M.	.....	"	New Hampshire.	Feb. 27, 1913	Exhaustion in choreic insanity.
Gordon, Edward A.	37	"	.....	"	"	Mar. 4, 1913	Paresis.
Sanborn, Frank	72	"	.....	"	"	Mar. 8, 1913	Exhaustion in senile dementia.
Lavoie, August	46	"	.....	"	Canada	Mar. 18, 1913	Cerebral hemorrhage.
Blake, Lewis F.	58	"	.....	"	New Hampshire.	Mar. 19, 1913	Exhaustion in senile dementia.
Flower, Mabel	16	"	F.	"	"	Mar. 23, 1912	Epilepsy.
Pinkham, Lily A.	38	"	"	"	"	Mar. 23, 1913	Exhaustion in dementia præcox.
Cutter, Mary	34	"	"	"	"	Mar. 24, 1913	Chronic interstitial nephritis.
Spaulding, Susan J.	92	"	"	"	"	Mar. 24, 1913	Exhaustion in senile dementia.
Weeks, Joseph P.	78	M.	.....	"	"	April 1, 1913	Passive pneumonia.
Lacaille, Rosanna	38	"	F.	"	Canada	April 5, 1913	Anæmia.
Chandler, Elizabeth C. ...	87	"	.....	"	New Hampshire.	April 6, 1913	Exhaustion in senile dementia.
Gibson, Elwin J.	69	M.	.....	"	Vermont	April 8, 1913	Exhaustion in involuntional melancholia.
St. Germain, George	45	"	.....	"	Massachusetts...	April 9, 1913	Epileptic convulsions.
Barrett, Harvey C.	32	"	.....	"	New Hampshire.	April 10, 1913	"
Arnold, Mary A.	37	"	F.	"	"	April 11, 1913	General tuberculosis.
Knight, Emily M.	82	"	.....	"	New Hampshire.	April 11, 1913	Fracture of femur.
Messer, Herbert F.	37	M.	.....	"	"	April 14, 1913	Exhaustion in dementia præcox.
Willey, William W.	66	"	.....	"	"	April 15, 1913	Diffuse nephritis.
Lyons, Newman	72	"	.....	"	"	April 19, 1913	Cerebral hemorrhage.
Mead, Edna G.	74	"	F.	"	Vermont	April 20, 1913	Cardiac embolism.
Hadley, Florence M.	42	"	"	"	New Hampshire.	April 21, 1913	Exhaustion in secondary dementia.
Sullivan, Ellen	23	"	"	"	"	April 22, 1913	Epilepsy.
Avery, Laura	50	"	"	"	"	April 27, 1913	Broncho pneumonia, secondary to mea- [sles.
Morley, Marion E.	76	"	"	"	England	April 30, 1913	Valvular disease of heart.
Cotton, Willard B.	23	M.	.....	"	New Hampshire.	May 1, 1913	Epilepsy.

Parker, John T.....	72	M.	.....	W.	Married ..	New Hampshire.	May	5, 1913	Exhaustion in organic dementia.
Saunders, Frederick H..	75	.....	F.	.....	Single	Massachusetts...	May	5, 1913	Arteriosclerosis.
Towne, Mary A.....	40	.....	.....	.....	Married ..	Nova Scotia	May	7, 1913	Amenia.
McIlherin, Ann	70	.....	.....	.....	Single	Ireland	May	12, 1913	Hemorrhage of bowels.
Cotter, John W.....	55	M.	.....	.....	.....	New Hampshire.	May	13, 1913	Interstitial nephritis.
Watson, Albert H.....	61	.....	.....	.....	Married ..	Vermont	May	15, 1913	Paresis.
Beaulieu, Edward	60	.....	F.	.....	Widowed ..	New Hampshire.	May	15, 1913	Cerebral hemorrhage.
Pike, Viola	22	.....	.....	.....	Married ..	New Hampshire.	May	18, 1913	Exhaustion in acute mania.
Clark, James	56	M.	.....	.....	Widowed ..	England	May	18, 1913	Diffuse nephritis.
Nealand, Annie	54	.....	F.	.....	.....	New York	May	21, 1913	Arteriosclerosis.
Dodge, Lizzie F.....	64	.....	.....	.....	Married ..	New Hampshire.	May	22, 1913	"
Larson, Gustave H.....	43	M.	.....	.....	.....	Sweden	May	27, 1913	Cerebral hemorrhage.
Bobilee, Mitchell	60	.....	.....	.....	"	Canada	May	30, 1913	Diarrhoea and enteritis.
Chesley, Millie A.....	31	.....	F.	.....	"	United States ..	June	2, 1913	Exhaustion in puerperal mania.
Morey, Sarah C.....	72	.....	.....	.....	Widowed ..	New Hampshire.	June	4, 1913	Valvular disease of heart.
Severance, Mary A.....	79	.....	.....	.....	Single	"	June	7, 1913	Exhaustion in senile dementia.
Card, John P.....	39	M.	.....	.....	.....	Canada	June	8, 1913	Cystitis.
Dupont, Alexander	65	.....	.....	.....	Married ..	New Hampshire.	June	15, 1913	Interstitial nephritis.
Maynard, Mary	69	.....	F.	.....	Widowed ..	England	June	15, 1913	Arteriosclerosis.
Andrews, Edward	76	M.	.....	.....	.....	England	June	18, 1913	Edema of brain.
McAuliffe, Frank	36	.....	.....	.....	Single	New Hampshire.	June	28, 1913	Septicæmia (general).
Porter, Eva J.....	29	.....	F.	.....	.....	Canada	June	28, 1913	Epilepsy.
Brown, Mary B.....	76	.....	.....	.....	Widowed ..	New Hampshire.	July	2, 1913	Exhaustion in senile dementia.
Babbitt, John	55	M.	.....	.....	.....	Connecticut	July	2, 1913	Surgical shock.
LaFlam, Peter	62	.....	.....	.....	Married ..	Canada	July	6, 1913	Cerebral hemorrhage.
Gervais, Ludger	61	.....	.....	.....	"	"	July	6, 1913	Interstitial nephritis.
Goodwin, Walter E.....	40	.....	.....	.....	"	"	July	13, 1913	Paresis.
Straw, John E.....	55	.....	.....	.....	Widowed ..	New Hampshire.	July	20, 1913	Interstitial nephritis.
Leash, Minnie	33	.....	.....	.....	Single	Canada	July	22, 1913	Acute enteritis.
McNally, Sybil	42	.....	F.	.....	.....	Canada	July	24, 1913	Pellagra.
Mann, George H.....	65	.....	.....	.....	Married ..	New Hampshire.	July	29, 1913	Cerebral hemorrhage.
Gillan, Bertha K.....	32	M.	.....	.....	.....	"	July	31, 1913	Suicide by hanging.
Parker, Lucinda	65	.....	F.	.....	Single	"	Aug.	3, 1913	Epileptic coma.
Plourde, Margaret	88	.....	.....	.....	Married ..	Canada	Aug.	4, 1913	Diarrhoea and enteritis.
Horne, Augustus	80	M.	.....	.....	.....	New Hampshire.	Aug.	7, 1913	Exhaustion in senile dementia.
Buckminister, William H	74	.....	.....	.....	Married ..	Canada	Aug.	10, 1913	"
Uniac, Mamie	41	.....	F.	.....	Widowed ..	New Hampshire.	Aug.	15, 1913	"
Reed, Isadore S.....	58	.....	.....	.....	Single	United States ..	Aug.	17, 1913	Acute gastritis and enteritis.
Horsington, Lucian	74	.....	.....	.....	Single	New Hampshire.	Aug.	18, 1913	Mitral disease of heart.
Gillan, James	60	M.	.....	.....	Married ..	Canada	Aug.	19, 1913	Exhaustion in senile dementia.
Vallee, George	32	.....	.....	.....	Single	Ireland	Aug.	21, 1913	Acute alcoholism.
Fisher, George	56	.....	.....	.....	.....	New Hampshire.	Aug.	22, 1913	Paresis.
Hannigan, Thomas	34	.....	.....	.....	Single	"	Aug.	22, 1913	Chronic diffuse nephritis.
Gendron, Julia	38	.....	F.	.....	"	New Hampshire.	Aug.	26, 1913	Acute alcoholism.
		.....	.....	.....	"	"	Aug.	29, 1913	Acute gastritis and enteritis.

TABLE NO. 3.—Continued.—DEATHS.

Persons who died at the Rockingham County Asylum during the year ending August 31, 1913.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of death.	How long at institution.			Cause of death.
	Years.	Male.	Female.	Color.	Single, married or widowed.		Years.	Months.	Days.	
Sweeney, Katie.....	83	.....	F.	W.	Single	Mar. 21, 1913	37	..	..	[sclerosis. Edema of lung.
Eldredge, Mary.....	64	.....	"	"	.....	Jan. 4, 1913	24	..	..	Chronic nephritis.
Mills, Josephine.....	48	.....	"	"	Widowed.	Oct. 25, 1912	18	..	..	Epilepsy.

Persons who died at the Strafford County Asylum during the year ending August 31, 1913.

None.

Persons who died at the Belknap County Asylum during the year ending August 31, 1913.

Clark, John	85	M.	W.	Widowed.	American.....	Oct. 3, 1913.	4	8	10	Old age.
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Persons who died at the Carroll County Asylum during the year ending August 31, 1913.

None.

Persons who died at the Merrimack County Asylum during the year ending August 31, 1913.

None.

Persons who died at the Hillsborough County Asylum during the year ending August 31, 1913.

Coyne, Mary	71	F.	Single	Irish.....	Dec. 24, 1912	17	11	8	Dementia.
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Persons who died at the Cheshire County Asylum during the year ending August 31, 1913.

None.

Persons who died at the Sullivan County Asylum during the year ending August 31, 1913.

Young, Nathan	82	M.	W.	Married	Mar. 15, 1913	...	5	Old age.
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Persons who died at the Grafton County Asylum during the year ending August 31, 1913.

None.

Persons who died at the Coös County Asylum during the year ending August 31, 1913.

None.

COMMITMENTS.

1914.

TABLE NO. 4.—COMMITMENTS.

Persons committed to the New Hampshire State Hospital during the year ending August 31, 1914.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of commitment.	Where from.
	Years.	Male.	Female.	Color.	Single, married or widowed.		
Reagan, Martin J.....	45	M.	.....	W.	Married.....	Sept. 3, 1913	Manchester.
Desrozier, Alphonse.....	48	"	.....	"	Widowed.....	Sept. 3, 1913	"
Roberts, Emma.....	59	.....	F.	"	Single.....	Sept. 3, 1913	Orford.
Bryer, Ellen.....	69	.....	"	"	Married.....	Sept. 5, 1913	Newport.
Healy, Catherine.....	32	.....	"	"	Single.....	Sept. 6, 1913	Manchester.
Brock, Sarah.....	65	.....	"	"	Single.....	Sept. 6, 1913	Pittsfield.
Andrews, William D.....	25	M.	.....	"	"	Sept. 6, 1913	Portsmouth.
Dwyer, Annie T.....	32	.....	F.	"	"	Sept. 7, 1913	Manchester.
Drew, Mary A.....	39	.....	"	"	"	Sept. 7, 1913	Alton.
Clark, John T.....	82	M.	.....	"	Widowed.....	Sept. 8, 1913	Rochester.
Duane, James H.....	54	"	.....	"	Married.....	Sept. 8, 1913	Warner.
Hoyt, George S.....	59	"	.....	"	"	Sept. 8, 1913	Sandwich.
Berry, Ernest H.....	32	"	.....	"	Single.....	Sept. 8, 1913	Concord.
Fisher, George W.....	65	"	.....	"	Married.....	Sept. 12, 1913	Keene.
Vennard, John L.....	74	.....	"	"	"	Sept. 12, 1913	Portsmouth.
Carter, Sarah.....	33	.....	F.	"	"	Sept. 12, 1913	Manchester.
Belange, Joseph.....	19	M.	.....	"	Single.....	Sept. 12, 1913	Claremont.
Knight, Ella.....	34	.....	F.	"	Married.....	Sept. 13, 1913	Concord.
Noyes, Margaret.....	..	.....	"	"	"	Sept. 14, 1913	Returned from trial.
Ellard, Kathleen.....	42	.....	"	"	Married.....	Sept. 15, 1913	Concord.
Bjorkland, Carl.....	66	M.	.....	"	Widowed.....	Sept. 16, 1913	Manchester.
Duke, Lewis.....	45	"	.....	"	Married.....	Sept. 19, 1913	Nashua.
Gleason, Ida N.....	38	.....	F.	"	"	Sept. 19, 1913	Manchester.
Roboin, Laura.....	21	.....	"	"	Single.....	Sept. 19, 1913	"
Lovell, Fred A.....	28	M.	.....	"	Married.....	Sept. 20, 1913	Lebanon.
Hebert, Napoleon.....	56	"	.....	"	"	Sept. 22, 1913	Manchester.
Flanders, Edith M.....	34	.....	F.	"	Divorced.....	Sept. 24, 1913	Bristol.

	39	M.	W.	Married....	Poland	Sept. 24, 1913	Manchester.
Iszyk, Wicenty.	39	M.	F.	Single....	Ireland	Sept. 24, 1913	"
Healey, Josephine.	28	M.	F.	Widowed ..	New Hampshire.	Sept. 26, 1913	Milan.
Harrington, Albert.	42	M.	F.	Married....	Canada	Sept. 26, 1913	Alton.
Hay, Margaret.	51	M.	F.	Single....	New Hampshire.	Sept. 27, 1913	Rochester.
Bradley, Burnside.	53	M.	F.	"	"	Sept. 28, 1913	Portsmouth.
Carr, Catherine.	25	M.	"	"	"	Sept. 28, 1913	Madbury.
Loach, Charles H. G.	33	"	"	"	"	Sept. 30, 1913	Concord.
Rowe, Harry.	50	M.	F.	Married....	Maine.....	Oct. 1, 1913	Stewartstown.
Gray, Eliza A.	60	"	"	Single....	New Hampshire.	Oct. 2, 1913	Returned from elopement.
Hustis, James H.	65	"	"	Married ..	New Hampshire.	Oct. 3, 1913	Pembroke.
Harriman, Florin	33	M.	F.	Married ..	Canada	Oct. 3, 1913	Derry.
Fleury, Rosanna.	40	M.	F.	Widowed ..	Vermont	Oct. 4, 1913	Marlborough.
Bergeon, Frank	76	M.	F.	Married ..	New Hampshire.	Oct. 4, 1913	Hampton Falls.
Randall, Mary E.	52	M.	F.	Single....	Ireland.....	Oct. 7, 1913	Nottingham.
Swain, Annie M.	68	"	"	Married ..	New Hampshire.	Oct. 7, 1913	Manchester.
Dame, Frank H.	64	"	"	"	Ireland.....	Oct. 9, 1913	Lacomia.
Pelkey, Ellen L.	19	M.	"	"	New Hampshire.	Oct. 10, 1913	Littleton.
Belleau, Albia L.	52	"	"	Divorced ..	New York	Oct. 11, 1913	Derry.
Morris, John A.	76	"	"	Widowed ..	New Hampshire.	Oct. 16, 1913	Hopkinton.
Darling, James P.	73	"	"	Married ..	Canada	Oct. 18, 1913	New Hampshire.
Gnerin, Edward	40	"	"	"	New Hampshire.	Oct. 19, 1913	Returned from elopement.
Hills, Morris	"	"	"	"	"	Oct. 20, 1913	Returned from a visit.
Simard, Paul E.	25	M.	F.	Single....	New Hampshire.	Oct. 20, 1913	Peterborough.
Kiddler, Clyde	59	"	"	Married ..	Canada	Oct. 20, 1913	Manchester.
Nadeau, Elende	36	"	"	Widowed ..	Massachusetts.	Oct. 21, 1913	Boscawen.
Sturtevant, Simeon	69	M.	F.	Married ..	New Hampshire.	Oct. 21, 1913	Goffstown.
Fisher, Esther C.	64	"	"	"	"	Oct. 22, 1913	Dover.
Woods, George F.	79	"	"	"	Italy.....	Oct. 23, 1913	East Jaffrey.
Jenness, George H.	33	"	"	Widowed ..	Canada	Oct. 23, 1913	Hampstead.
Constantino, James	57	"	"	Divorced ..	New Hampshire.	Oct. 23, 1913	Tilton.
Fountain, Nelson	51	M.	F.	Married....	Ireland.....	Oct. 23, 1913	Manchester.
Jewell, Emma L.	53	"	"	Single....	"	Oct. 25, 1913	Nashua.
Connor, Patrick	45	"	"	"	"	Oct. 25, 1913	Walpole.
Dorgan, Michael	72	"	"	"	New Hampshire.	Oct. 29, 1913	New Hampton.
Harty, David.	78	"	"	Married....	Poland	Oct. 30, 1913	Chesterfield.
Fifield, Harriet	44	M.	F.	Single....	Massachusetts.	Oct. 30, 1913	Manchester.
Hopkins, Ella	40	"	"	Married ..	Italy.....	Oct. 30, 1913	Tuftonboro.
Krowczyk, Joseph	50	M.	F.	"	Massachusetts.	Oct. 31, 1913	Portsmouth (State Prison transfer.)
Wallace, Harriet	38	"	"	Single....	Massachusetts.	Nov. 1, 1913	Manchester
Trovato, Augustino	28	"	"	Married....	"	"	Newton.
Brady, Edward	50	"	"	"	"	"	"
Nichols, Nellie L.	"	"	"	"	"	"	"

TABLE NO. 4.—Continued.—COMMITMENTS.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of commitment.	Where from.
	Years.	Male.	Female.	Color.			
Emerson, Edgar W.....	58	M.	.....	W.	New Hampshire.	Nov. 2, 1913	Manchester.
Connors, Thomas.....	39	"	.....	"	Massachusetts.....	Nov. 4, 1913	Keene.
Noury, Alphonsine.....	30	"	F.	"	Canada.....	Nov. 4, 1913	Manchester.
Jones, George T.....	53	M.	.....	"	New Hampshire.	Nov. 4, 1913	Nashua.
Gryncevich, John.....	37	"	.....	"	Russia.....	Nov. 5, 1913	Manchester.
Libby, Forrest B.....	23	"	.....	"	New Hampshire.	Nov. 6, 1913	Claremont.
Hutchins, George C.....	66	"	.....	"	Massachusetts..	Nov. 7, 1913	Manchester.
Lonergan, Thomas.....	43	"	.....	"	Illinois.....	Nov. 8, 1913	Portsmouth.
Dufour, Ernestine.....	32	"	F.	"	Canada.....	Nov. 8, 1913	Nashua.
Gibney, Frank.....	43	M.	.....	"	New Hampshire.	Nov. 9, 1913	Concord.
Weeks, Annie.....	46	"	F.	"	"	Nov. 9, 1913	Newbury.
Côté, Celena.....	22	"	"	"	"	Nov. 12, 1913	Dover.
Champagne, Philomene.....	71	"	"	"	Canada.....	Nov. 12, 1913	Manchester.
Smith, Bessie.....	23	"	"	"	New Hampshire.	Nov. 13, 1913	Kingston.
Deschaine, Archille.....	73	M.	.....	"	Canada.....	Nov. 14, 1913	Nashua.
Proctor, Etta M.....	23	"	F.	"	New Hampshire.	Nov. 18, 1913	Candia.
Chapman, William E.....	33	M.	.....	"	Maine.....	Nov. 18, 1913	Portsmouth.
Johnson, Etta.....	44	"	F.	"	New Hampshire.	Nov. 18, 1913	Manchester.
Tatten, Honor.....	28	"	"	"	Rhode Island....	Nov. 21, 1913	Portsmouth.
McCloskey, James.....	29	M.	.....	"	Massachusetts....	Nov. 22, 1913	New Hampton.
Chapman, John.....	26	"	.....	"	"	Nov. 24, 1913	Returned from elopement.
McMahon, James.....	48	"	"	"	New Hampshire.	Nov. 24, 1913	Concord.
Putney, Carrie.....	56	"	F.	"	Massachusetts....	Nov. 24, 1913	Jackson.
Johnson, Jock (alias John).....	18	M.	.....	"	New Hampshire.	Nov. 24, 1913	Sutton.
Dillon, Catherine.....	45	"	F.	"	Massachusetts....	Nov. 24, 1913	Alton.
Drew, Mary A.....	22	"	"	"	Ireland.....	Nov. 24, 1913	Manchester.
Adams, Evelyn (alias Jose- Boyd, Hattie-(phine Gonchu	22	"	"	"	New Hampshire.	Nov. 27, 1913	Returned from elopement.
	..	"	"	"	"	Nov. 29, 1913	Concord.
		"	"	"	"	Nov. 29, 1913	Returned from a visit.

Caron, Antino	24	M.	W.	Single	Canada	Dec.	1, 1913	Jaffrey.
Bryant, Mary Jennie	34	M.	"	Married	England	Dec.	1, 1913	Keene.
Blake, Laforest A.	36	M.	"	Single	Maine	Dec.	3, 1913	Bristol.
Chisholm, Ethel	28	M.	"	Single	New Hampshire	Dec.	3, 1913	Returned from a visit.
Spauld, Arthur B.	44	M.	"	Married	Maine	Dec.	4, 1913	West Concord.
Stoddard, Delia F.	51	M.	"	Single	Massachusetts	Dec.	5, 1913	Returned from trial at home.
Balcom, Fred M.	33	"	"	Married	Ireland	Dec.	6, 1913	Nashua.
Doyte, Patrick J.	34	"	"	Married	Germany	Dec.	8, 1913	Manchester.
Kaps, Pauline	43	"	"	"	Egypt	Dec.	9, 1913	"
Bailey, Muriel	33	"	"	Single	Massachusetts	Dec.	9, 1913	"
Bickford, Elizabeth	53	M.	"	Single	New Hampshire	Dec.	10, 1913	Belmont.
Pierce, Edwin	33	"	"	"	"	Dec.	11, 1913	Dover.
Little, Mae	22	"	"	"	Syria	Dec.	11, 1913	Lisbon.
Balian, Leon	17	M.	"	"	Finland	Dec.	13, 1913	Salem.
Jackson, Mary H.	31	"	"	Married	Vermont	Dec.	13, 1913	Brookline.
Holden, George W.	81	M.	"	Widowed	Massachusetts	Dec.	13, 1913	Claremont.
Familae, William H.	35	"	"	Married	New Hampshire	Dec.	15, 1913	Deering.
White, Frank P.	58	"	"	"	"	Dec.	16, 1913	Haverhill.
Lasage, Oscar	26	"	"	"	"	Dec.	16, 1913	Nashua.
Gray, Hattie L.	28	"	"	Single	"	Dec.	17, 1913	Dover.
Tuttle, Leonard	65	M.	"	Widowed	Massachusetts	Dec.	17, 1913	Concord.
Wilkinson, Walter	52	"	"	Married	New Hampshire	Dec.	18, 1913	Groveton.
Webster, Emily P.	40	"	"	Widowed	"	Dec.	18, 1913	Raymond.
Brown, Mary L.	35	"	"	Married	"	Dec.	19, 1913	Weare.
Gorrell, Albert	48	M.	"	"	Maine	Dec.	19, 1913	Concord.
Fortier, Albert	22	"	"	Single	Poland	Dec.	19, 1913	Berlin.
Vanouces, Antonio	27	"	"	"	"	Dec.	20, 1913	Keene.
Chisholm, Ethel	36	"	"	Divorced	New Hampshire	Dec.	23, 1913	Returned from visit.
McDonald, Nellie E.	31	M.	"	Single	Germany	Dec.	23, 1913	Barrington.
Knoetig, Herman	49	"	"	Married	New Hampshire	Dec.	24, 1913	Manchester.
Barney, Lizzie	54	M.	"	Widowed	"	Dec.	24, 1913	"
Knowles, Nathaniel	28	"	"	Single	Maine	Dec.	26, 1913	Campton.
Leonard, Frank	33	"	"	"	Ireland	Dec.	26, 1913	Manchester.
O'Connell, Michael	45	M.	"	Married	Massachusetts	Dec.	27, 1913	Concord.
Turner, Carrie	62	"	"	"	New Hampshire	Dec.	27, 1913	Portsmouth.
Bingham, Joseph	30	M.	"	"	Massachusetts	Dec.	27, 1913	Gilsium.
Young, Ida W.	27	"	"	Single	Canada	Dec.	27, 1913	Hudson.
Howe, Esther	35	"	"	"	New Hampshire	Dec.	29, 1913	Manchester.
Tenney, Charlie A.	20	M.	"	Widowed	Vermont	Dec.	30, 1913	Wilmot.
Conway, Mary	61	"	"	Single	New Hampshire	Dec.	30, 1913	Manchester.
Dow, John G.	46	M.	"	"	"	Dec.	30, 1913	Concord.
Little, Mabel	37	"	"	"	"	Jan.	3, 1914	Goffstown.
Mauseur, Edwin		M.	"	"	"	Jan.	3, 1914	Wilton.

TABLE NO. 4.—Continued.—COMMITMENTS.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of commitment.	Where from.
	Years.	Male.	Female.	Color.			
Blodgett, George S.	36	M.	..	W.	New Hampshire	Jan. 4, 1914	Returned from a visit.
Peasley, Mabel J.	47	..	F.	"	Massachusetts	Jan. 6, 1914	Henniker.
Carr, Olive.	38	M.	..	"	Canada	Jan. 7, 1914	Plainbow.
Ruel, Joseph	48	..	F.	"	New Hampshire	Jan. 8, 1914	Somersworth.
McCabe, Ella	..	..	..	"	New Hampshire	Jan. 10, 1914	Manchester.
Sullivan, Mary A.	19	..	..	"	New Hampshire	Jan. 9, 1914	Returned from a visit.
Hamel, Minnie	67	M.	..	"	Massachusetts	Jan. 15, 1914	Manchester.
Fletcher, Warren G.	79	..	F.	"	Vermont	Jan. 16, 1914	Antrim.
Story, Sophronia.	68	M.	..	"	New Hampshire	Jan. 16, 1914	Bristol.
Ray, Orrin B.	56	..	F.	"	Ireland	Jan. 19, 1914	Merrimack.
Barnes, Charlotte	45	..	..	"	Maine	Jan. 20, 1914	Somersworth.
Edge, Catherine	55	M.	..	"	Canada	Jan. 20, 1914	Charlestown.
Williams, Florence	45	..	F.	"	New Hampshire	Jan. 22, 1914	Franklin.
Robichaud, Ernest.	45	M.	..	"	Canada	Jan. 27, 1914	Wolfeboro.
Piper, Nettie C.	45	..	F.	"	New Hampshire	Jan. 27, 1914	Berlin.
Danforth, Fairfield.	70	M.	..	"	Canada	Jan. 29, 1914	Manchester.
Mader, Catherine	40	..	F.	"	New Hampshire	Jan. 30, 1914	Newport.
Mallard, Henry J.	23	M.	..	"	Canada	Jan. 31, 1914	Milford.
Cotter, William J.	40	..	..	"	Vermont	Jan. 31, 1914	Claremont.
Brennan, Daniel	27	..	..	"	Maine	Feb. 2, 1914	Concord.
Bixby, Martin J.	72	..	..	"	New Hampshire	Feb. 2, 1914	Laconia.
Carr, Stillman G.	32	..	..	"	Canada	Feb. 3, 1914	Nashua.
Varney, Charles.	18	..	..	"	Canada	Feb. 4, 1914	Hudson.
Gray, Enoch	69	..	F.	"	New Hampshire	Feb. 4, 1914	Landaff.
Hamlin, Clara	38	..	..	"	Canada	Feb. 5, 1914	Penacook.
Burneche, Lucie	41	..	..	"	New Hampshire	Feb. 5, 1914	Manchester.
Woods, Charles O.	30	M.	..	"	Poland	Feb. 6, 1914	
Corbett, Frank.	34	..	..	"	
Macek, Albert	20	..	..	"	

25	O'Connor, Mary A.	F.	Single.....	New Hampshire	Feb. 7, 1914	Keene.
39	KcKav, Eliza	"	Widowed	"	Feb. 11, 1914	Nashua.
38	Counroyer, Arthur	M.	Married....	"	Feb. 11, 1914	Berlin.
44	Cowett, Frank	"	Single.....	Canada.....	Feb. 12, 1914	Concord.
45	Grace, Richard	"	Married....	Ireland.....	Feb. 18, 1914	Portsmouth.
17	Beede, Fred C.	"	Single.....	New Hampshire	Feb. 18, 1914	Fremont.
30	Leaman, Florence	F.	Married....	Pennsylvania	Feb. 18, 1914	Manchester.
66	Parker, Edward O	"	"	Massachusetts	Feb. 18, 1914	Bath.
67	Wallingford, Eliza	F.	Single.....	Maine.....	Feb. 19, 1914	Somersworth.
39	Sullivan, Hildegard	"	"	Ireland.....	Feb. 19, 1914	Manchester.
32	Lord, Leon A	M.	Married....	New Hampshire	Feb. 20, 1914	Conway.
34	Winn, James K.	"	Single.....	"	Feb. 21, 1914	Harrisville.
59	Fulson, Fred P.	"	Married....	Canada.....	Feb. 24, 1914	Portsmouth.
46	Robidoux, Charles	"	"	New Hampshire	Feb. 24, 1914	Manchester.
65	Prescott, Sarah E.	F.	Single.....	Canada.....	Feb. 26, 1914	Nottingham.
23	Radoun, Anna	"	Married....	"	Feb. 28, 1914	Manchester.
34	Gifford, Erwin J.	M.	"	"	March 2, 1914	Concord.
64	Cloutier, Lucie	F.	"	New Hampshire	March 3, 1914	Derry.
27	Caswell, George B	M.	Single.....	"	March 3, 1914	Lebanon.
17	Moulton, Howard	"	"	"	March 4, 1914	Moultonborough.
67	Manley, Myrtle	F.	"	"	March 5, 1914	West Concord.
42	Cote, Adeline	"	Widowed	Canada.....	March 6, 1914	Manchester.
27	Rand, Henry A.	M.	Single.....	New Hampshire	March 7, 1914	Portsmouth.
75	Pickering, Juba E.	"	"	Rhode Island...	March 9, 1914	Mery.
20	Kendrick, John	"	Widowed	New Hampshire	March 9, 1914	Meridith.
25	Hollingshead, Emma	F.	Married....	Maine.....	March 9, 1914	Derry.
57	Gilmarin, Patrick	"	Single.....	New Hampshire	March 10, 1914	Manchester.
35	Borden, Martin F.	M.	"	"	March 11, 1914	Nashua.
64	Oja, John K.	"	Married....	Finland.....	March 12, 1914	Fitzwilliam.
34	Moulton, Eleanor J	"	Widowed	Ireland.....	March 12, 1914	Langdon.
64	Boucher, Frederick, alias Ar-	M.	"	Maine.....	March 13, 1914	Dover (State Prison).
56	Guay, Joseph O. [thru Rugh	"	Divorced	Canada.....	March 17, 1914	Northumberland.
..	Chisholm, Ethel D.	F.	"	"	March 15, 1914	Returned from a visit
..	Batchelder, Frank G	M.	"	"	March 19, 1914	"
..	Lasage, Oscar	"	"	"	March 19, 1914	"
64	Robinson, Lizzie	F.	Single.....	Canada.....	March 19, 1914	Nashua.
65	Tyrombly, Chester A.	"	Married....	New Hampshire	March 19, 1914	Alton.
11	Adams, Hazel M.	F.	Single.....	"	March 19, 1914	Pittsfield.
32	Gould, Mamie N.	"	Married....	Illinois.....	March 20, 1914	Claremont.
80	Riley, Ellen	"	"	Scotland.....	March 20, 1914	Manchester.
38	Griffin, Margaret	"	Widowed	New Hampshire	March 20, 1914	"
36	Sampson, Frank	M.	Single.....	Maine.....	March 22, 1914	"
21	Burns, Daisy	F.	"	New Hampshire	March 23, 1914	Milford.
18	Wombly, Aubrey E.	M.	Widowed	"	March 24, 1914	Conway.

TABLE NO. 4.—Continued.—COMMITMENTS.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of commitment.	Where from.
	Years.	Male.	Female.	Color.	Single, married or widowed.		
McDermott, William.....	61	M.	..	W.	Single.....	March 26, 1914	Nashua.
Skinner, Flora E.....	31	M.	F.	"	..	March 27, 1914	Canaan.
Wilson, Harry.....	..	M.	..	"	Married..	March 27, 1914	Returned from elopement-
Noel, Ovide.....	37	..	F.	"	..	March 30, 1914	Nashua.
Hasu, Mary.....	28	M.	..	"	Widowed..	April 1, 1914	Milford.
Goldthwait, Ephrein J.....	64	M.	F.	"	Single.....	April 1, 1914	Dover.
Tynan, Tess.....	43	M.	..	"	Married..	April 1, 1914	Manchester.
LeClair, John B.....	28	M.	..	"	..	April 1, 1914	Nashua.
Leaman, Florence.....	30	M.	F.	"	Single.....	April 2, 1914	Manchester.
Call, Albion K. R.....	18	..	..	"	Married..	April 2, 1914	Claremont.
Boyle, R. Edward.....	38	M.	..	"	Single.....	April 2, 1914	Laconia.
Warren, Mary E.....	42	M.	F.	"	..	April 3, 1914	Woodsville.
Turcotte, Joseph W.....	14	"	..	"	"	April 3, 1914	Somersworth.
Westcott, Arthur.....	31	..	..	"	Married..	April 3, 1914	Hopkinton.
Hatch, Ella.....	50	M.	F.	"	..	April 3, 1914	Keene.
Wentworth, George L.....	33	"	..	"	"	April 7, 1914	Manchester.
Syrek, John.....	39	..	..	"	Single.....	April 7, 1914	Nashua.
Flaherty, Fred.....	23	..	..	"	Married..	April 8, 1914	Claremont.
Nichols, George.....	62	..	..	"	Single.....	April 9, 1914	Northfield.
Jewell, Emma J.....	50	M.	F.	"	..	April 13, 1914	Lancaster.
Smith, Ernest E.....	52	..	F.	"	Widowed..	April 13, 1914	Concord.
Brown, Helen.....	78	..	..	"	..	April 13, 1914	Manchester.
Hull, Jarius.....	68	M.	..	"	Married..	April 13, 1914	"
Bechman, Philip.....	47	"	..	"	Single.....	April 14, 1914	Bristol.
Bryson, Thomas.....	54	..	..	"	Married..	April 16, 1914	Somersworth.
Matesik, Celia.....	38	M.	F.	"	Single.....	April 16, 1914	Manchester.
Wynrod, Andrew.....	24	..	..	"	Married..	April 17, 1914	"
Smith, Charles D.....	58	..	..	"	Single.....	April 20, 1914	"
Provanché, Josephine.....	30	..	F.	"	..	April 21, 1914	Laconia.

33	Gosley, Mary	F.	W.	Married	Vermont	April 21, 1914	Belmont.
68	Kimball, Jonathan E.	"	"	"	New Hampshire.	April 21, 1914	Rochester.
50	Johnson, Frank	"	"	"	Vermont	April 21, 1914	Littleton.
53	Moxley, Etta B.	F.	"	"	"	April 22, 1914	Concord.
46	Wellington, Fred T.	M.	"	"	Massachusetts	April 22, 1914	Monroe.
32	Carl, Stelman G.	"	"	"	Maine	April 22, 1914	Concord.
31	Cate, Maeedythe	F.	"	Divorced Single	New Hampshire.	April 23, 1914	Dover.
26	Johnson, Grace	"	"	"	Vermont	April 23, 1914	Concord.
19	LeFebvre, Philip	"	"	"	New Hampshire.	April 23, 1914	Nashua.
44	St. Cyr, Napoleon	"	"	Married	Canada	April 25, 1914	Manchester.
..	Chisholm, Ethel D.	F.	"	"	"	April 25, 1914	Returned from a visit.
70	White, Mary C. J.	"	"	"	"	April 25, 1914	"
51	Blanchard, Mary A.	"	"	Widowed	New Hampshire.	April 26, 1914	Manchester.
39	Balcom, Fred M.	M.	"	Married	Massachusetts	April 27, 1914	Peterborough.
24	Dion, Philanese	F.	"	"	Canada	April 27, 1914	Littleton.
35	Gaudreau, Emile	M.	"	Single	"	April 29, 1914	Nashua.
36	Ducey, John	"	"	"	New Hampshire.	April 29, 1914	Wilton.
19	Lantry, Albert C.	"	"	"	"	April 29, 1914	Hooksett.
25	Adams, Iva Olive	F.	"	"	"	April 29, 1914	Thornton.
..	Perau, Eva	"	"	Married	"	April 30, 1914	Manchester.
75	Story, Sophronia E.	"	"	"	"	April 30, 1914	Returned from trial visit.
..	MacLinn, George D.	"	"	"	"	April 30, 1914	Returned from trial visit.
54	Sullivan, Mary A.	M.	"	Married	Vermont	May 1, 1914	Tilton.
38	Gale, Sarah	F.	"	Widowed	New Hampshire.	May 2, 1914	Returned from a visit.
26	Madden Fanny A.	"	"	Married	"	May 3, 1914	Bartlett.
..	Hutton, Etta	"	"	"	"	May 7, 1914	Weirs.
44	Moxley, Etta	"	"	"	"	May 8, 1914	Newmarket.
26	Ford, Charles M.	"	"	"	"	May 8, 1914	Returned.
37	Johnson, Alice	F.	"	Married	New Hampshire.	May 9, 1914	Hudson.
..	Mohbat, Joseph	"	"	"	Massachusetts	May 10, 1914	Nashua.
19	Brennan, Daniel	M.	"	Single	Syria	May 11, 1914	Berlin.
27	Thurston, Clayton W	"	"	"	"	May 11, 1914	Returned.
46	Stone, William E.	"	"	"	Maine	May 13, 1914	Ettingham.
60	Fales, Edward F.	"	"	"	Canada	May 13, 1914	Concord (vagrant.)
40	Young, Lillian A.	"	"	"	"	May 15, 1914	Nashua.
26	Grimes, Joseph F.	"	"	"	"	May 16, 1914	Cornish.
27	Belanger, Joseph	F.	"	"	Vermont	May 16, 1914	Portsmouth.
36	Dumas, Adela	"	"	"	New Hampshire.	May 17, 1914	Dover.
19	Kavish, Celia	"	"	"	Canada	May 17, 1914	Concord.
53	Moxley, Etta B.	"	"	"	"	May 20, 1914	Manchester.
17	Garipey, Adelpard	F.	"	Single	Russia	May 21, 1914	Concord.
56	Frost, Charles W	"	"	Married	Vermont	May 23, 1914	Manchester.
..	Martin, Samuel	"	"	Widowed	New Hampshire.	May 23, 1914	Fremont.
55	"	"	"	"	Nova Scotia	May 25, 1914	Nashua.
..	"	"	"	"	Maine	May 26, 1914	"

TABLE NO. 4.—Continued.—COMMITMENTS.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of commitment.	Where from.
	Years.	Male.	Female.	Color.			
Swain, Carl	30	M.	.....	W.	Maine	May 29, 1914	Berlin.
Youst, Edward	41	.....	.....	"	Pennsylvania..	May 29, 1914	Boscawen.
Page, Ethel L.	35	.....	F.	"	New Hampshire.	May 31, 1914	Concord.
Weymouth, Henry G.	24	M.	.....	"	"	June 1, 1914	Lyme.
Kimball, Jonathan E.	68	.....	F.	"	Canada	June 2, 1914	Rochester.
Fay, Annie B.	51	M.	.....	"	New Hampshire.	June 2, 1914	Concord.
Bennett, William N.	49	.....	.....	"	"	June 2, 1914	Middleton.
Hoitt, James O.	59	"	.....	"	"	June 3, 1914	Hampton Falls.
Cannon, John	60	.....	F.	"	"	June 3, 1914	Keene.
Maynard, Miriam H.	77	.....	.....	"	Canada	June 3, 1914	Manchester.
Finley, Abbie	46	.....	.....	"	Maine	June 6, 1914	Berlin.
Fortier, Albert	23	M.	.....	"	New York	June 7, 1914	Brookline.
King, Ada L.	54	.....	F.	"	New Hampshire.	June 8, 1914	Lebanon.
Purnort, Elizabeth ..	53	.....	.....	"	Germany	June 9, 1914	Hillsborough.
Stahl, Charles J.	57	M.	.....	"	Connecticut.	June 10, 1914	Returned from an elopement.
Wilson, Harry .....	..	.....	.....	"	New Hampshire.	June 11, 1914	Nashua.
Coggins, Mary	23	.....	F.	"	"	June 12, 1914	Acworth.
Merrill, Helen M.	63	M.	.....	"	New Hampshire.	June 13, 1914	Returned from trial visit.
Lasage, Oscar	52	.....	.....	"	New Hampshire.	June 13, 1914	Keene.
Russell, Frank	83	"	.....	"	Ireland	June 13, 1914	Keene.
Brooks, Edward P.	74	"	.....	"	Canada	June 13, 1914	Belmont.
Brown, Thomas	80	.....	F.	"	New Hampshire.	June 13, 1914	Nashua.
Juneau, Matilda	43	.....	.....	"	"	June 14, 1914	Ossipee.
Mandigo, Ella F.	53	M.	.....	"	Canada	June 16, 1914	Groton.
Nichols, Alphonse	41	"	.....	"	Ireland	June 16, 1914	Farmington.
Brown, Walter S.	36	.....	F.	"	New Hampshire	June 16, 1914	Milford.
McGuire, Patrick H.	63	.....	.....	"	"	June 20, 1914	Portsmouth.
Nolan, Margaret .....	..	.....	.....	"	"	.....	.....
Gray, Nellie (formerly Eliza)	51	.....	.....	"	"	.....	.....

Pelky, Ellen	65	M.	F.	W.	Married	Ireland.	June 21, 1914	Concord.
Fletcher, Frank	29			"	Single	New Hampshire.	June 22, 1914	Lancaster.
Whidden, Elizabeth (former- ly admitted as Sarah E.) ..	64		F.	"	Married	"	June 22, 1914	Manchester.
Folsom, Mary R.	41		"	"	Widowed ..	"	June 23, 1914	New market.
Gleason, Ida	39	M.	"	"	Married ..	"	June 23, 1914	Manchester.
Leonard, Henry C.	45	"		"	"	Ireland	June 23, 1914	Wolfeboro.
Berry, William W.	68	"		"	Single	Pennsylvania ..	June 24, 1914	Manchester.
Topping, Robert M.	23	"		"	Married ..	Canada	June 25, 1914	"
Brown, Fred M.	44	"		"	Married ..	New Hampshire.	June 25, 1914	"
Towle, George W.	70	"		"	Widowed ..	"	June 27, 1914	Effingham.
Moore, Thomas	81		F.	"	"	England	June 28, 1914	Portsmouth.
Robinson, Florence				"	"	"	June 30, 1914	Returned from a visit.
Collins, John H.	68	M.	F.	"	Divorced ..	New Hampshire.	July 1, 1914	Manchester.
Merrill, Blanche L.	15		F.	"	Single	"	July 2, 1914	Deerfield.
Keefe, James	40	M.	F.	"	Married ..	Vermont	July 3, 1914	Alstead.
Dymunt, Evelyn	26		F.	"	"	New Hampshire.	July 4, 1914	Concord.
Merrill, Elizabeth	58		"	"	"	"	July 4, 1914	"
Jacobs, Agnes	24		"	"	Single	Ireland	July 4, 1914	Portsmouth.
Wilson, Theresa	39		"	"	Married ..	New Hampshire.	July 6, 1914	Manchester.
Conway, Mary	21	M.		"	Single	"	July 7, 1914	Returned from a visit.
Gage, Charles S. (Dubois)	35			"	Single	Massachusetts ..	July 7, 1914	Laconia.
Foley, John, alias Medrick	50		F.	"	Widowed ..	New Hampshire.	July 10, 1914	Manchester.
McCauley, Lizzie	70	M.		"	Married ..	"	July 11, 1914	Milton.
Genness, Charles G.	39		F.	"	"	Scotland	July 11, 1914	Hanover.
Badger, Pearl M.	46		"	"	Single	New Hampshire.	July 13, 1914	Rochester.
Varney, Mary E.	62	M.		"	Married ..	England	July 15, 1914	Manchester.
Flanagan, Thomas	64		F.	"	"	New Hampshire.	July 16, 1914	"
Tilton, David F.	19	M.		"	Single	New Hampshire.	July 18, 1914	Returned from a trial at home.
Page, Effie L.	31	M.	F.	"	Married ..	"	July 20, 1914	Bristol.
Pulsifer, Rhy B.	24		F.	"	Single	New Hampshire.	July 22, 1914	Manchester.
Kimon, Rosalie	34		"	"	Married ..	"	July 22, 1914	Returned from a visit.
Fitz, John L.	35		F.	"	Single	New Hampshire.	July 24, 1914	Chichester.
Hubbey, William	41		"	"	Married ..	Vermont	July 25, 1914	Returned from a visit.
Ingraham, Florence	88	M.		"	Single	Massachusetts ..	July 26, 1914	Claremont.
Thibodeau, Ada	75	"	"	"	Married ..	Canada	July 27, 1914	Hanover.
Wood, Mary	67	"	"	"	Widowed ..	England	July 28, 1914	Rochester.
Liquine, Frank	26		F.	B.	Single	New Hampshire.	July 28, 1914	Claremont.
Raine, William	34		"	W.	Married ..	New York	July 28, 1914	Concord.
Batchelder, Arthur	23		"	"	Divorced ..	New Hampshire.	July 29, 1914	Manchester.
Moody, Charles H.			"	"	Single	Ireland	July 29, 1914	"
Bondrean, Rose			"	"	Single	Canada	July 29, 1914	Nashua.
Mahoney, Catherine			"	"	"	"	"	"
Fredette, Joseph			"	"	"	"	"	"

TABLE NO. 4.—Continued.—COMMITMENTS.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of commitment.	Where from.
	Years.	Male.	Female.	Color.	Single, married or widowed.		
Strong, Ida C.....	42	.....	F.	W.	Married....	Aug.	Plainfield.
Brunelle, John.....	64	M.	.....	"	"	Aug.	Fitzwilliam.
Beeche, Edgar.....	40	"	.....	"	"	Aug.	Portsmouth.
McMunn, John.....	26	"	.....	"	Single....	Aug.	Keene.
Hartshorn, Harry A.....	47	"	.....	"	Married....	Aug.	Greenfield.
Chasse, Vital G.....	51	"	.....	"	Single....	Aug.	Manchester.
Bonney, Matilda A.....	26	.....	F.	"	Married....	Aug.	Weare.
Barney, Frances.....	32	.....	"	"	.....	Aug.	Nashua.
Chapman, John.....	..	M.	.....	"	.....	Aug.	Returned from elopement.
Ingraham, Florence.....	..	.....	F.	"	Single....	Aug.	Returned from a visit.
Corbin, Edward C.....	43	M.	.....	"	Widowed..	Aug.	Charlestown.
Dow, Anne.....	70	.....	F.	"	Single....	Aug.	Hampton.
Dailey, Joseph.....	43	M.	.....	"	Widowed..	Aug.	Manchester.
Pratt, Alice.....	43	.....	F.	"	"	Aug.	Concord.
Guimond, Rosalie.....	73	.....	"	"	.....	Aug.	Returned from a visit.
Healey, Ann.....	..	.....	"	"	.....	Aug.	"
Dolloff, Alice.....	..	.....	"	"	Married....	Aug.	Concord.
Whittier, Catherine.....	44	.....	"	"	.....	Aug.	Lebanon.
Gilman, Nellie.....	45	.....	"	"	New Hampshire.	Aug.	Pembroke.
Shean, Margaret.....	62	.....	"	"	Canada.....	Aug.	Manchester.
Soucy, Pierre.....	68	M.	.....	"	Switzerland	Aug.	Bennington.
Haas, Olga.....	50	.....	F.	"	New Hampshire.	Aug.	Wolfeboro.
McIntire, Hattie.....	63	.....	"	"	.....	Aug.	East Concord.
Colby, Chester.....	29	M.	.....	"	Single....	Aug.	Candia.
Smith, Everett J.....	21	.....	"	"	"	Aug.	Troy.
Ayers, Annie.....	38	.....	F.	"	England.....	Aug.	Manchester.
Gleason, Thomas F.....	32	M.	.....	"	New Hampshire.	Aug.	Haverhill.
Ward, Minnie L.....	50	.....	F.	"	"	Aug.	Hampton.
Lamprey, Chester A.....	31	M.	.....	"	Single.....	Aug.	Hampton.

Morse, Frank H.....	49	M.	.....	W.	Married....	New Hampshire.	Aug. 25, 1914	Manchester.
Mitchell, William.....	74	"	.....	"	"	Scotland.....	Aug. 27, 1914	North Woodstock.
Ross, Annie.....	34	"	F.	"	"	Massachusetts...	Aug. 27, 1914	Felham.
Hobbs, Philip.....	35	M.	.....	"	Single.....	New Hampshire.	Aug. 28, 1914	North Hampton.
Marcoux, Arthur.....	..	"	.....	"	"	Canada.....	Aug. 29, 1914	Returned from a visit.
Francoeur, Mary.....	43	"	F.	"	Married....	"	Aug. 31, 1914	Manchester.
Lee, Alfred, Jr.....	24	M.	.....	"	Single.....	Maine.....	Aug. 31, 1914	"
Smith, Ella T.....	64	"	F.	"	"	New Hampshire.	Aug. 31, 1914	"
Denning, Arabella R.....	63	"	.....	"	Married....	"	Aug. 31, 1914	Cornish.

Persons committed to the Rockingham County Asylum during the year ending August 31, 1914.

Hannah West.....	87	..	F.	W.	Widowed..	American.....	Aug. 16, 1913	Raymond.
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Persons committed to the Strafford County Asylum during the year ending August 31, 1914.

Bennett, Mary C.....	83	..	F.	W.	Widowed..	American.....	Sept. 1, 1913	Dover.
Chamberlin, Charles.....	70	M.	.....	"	"	"	Sept. 1, 1913	"
French, James.....	71	"	.....	"	Single.....	"	Sept. 1, 1913	Somersworth.
Gough, Susan B.....	61	..	F.	"	Widowed..	"	Sept. 1, 1913	"
Tebbetts, Ann M.....	76	..	"	"	Married....	"	Sept. 1, 1913	Rochester.
Edgerly, Mary A.....	83	..	"	"	Widowed..	"	Sept. 1, 1913	Dover.
Colony, Stephen.....	80	M.	.....	"	Single.....	"	Sept. 1, 1913	Rochester.
Murphy, Alice.....	76	..	F.	"	Widowed..	Irish.....	Sept. 1, 1913	Dover.
Jenkins, Henry A.....	53	M.	.....	"	"	American.....	Sept. 1, 1913	Farmington.
McCabe, John W.....	70	"	.....	"	"	Irish.....	Jan. 22, 1914	Dover.
Hoitt, Joseph.....	60	"	.....	"	"	American.....	Oct. 17, '13, to Nov. 15, Apr. 25	Middleton.

Persons committed to the Belknap County Asylum during the year ending August 31, 1914.

Jewell, Emma.....	57	F.	W.	American.....	April 1, 1914	Tilton.
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Persons committed to the Carroll County Asylum during the year ending August 31, 1914.

None.

Persons committed to the Merrimack County Asylum during the year ending August 31, 1914.

None.

Persons committed to the Hillsborough County Asylum during the year ending August 31, 1914.

NAME.	AGE, SEX AND CONDITION.						Nationality.	Date of commitment.	Where from.	
	Years.	Months.	Days.	Male.	Female.	Color.				
Johnson, Etta	41	4	21	..	F.	W.	Irish	Nov. 18, 1913	Manchester.	Trans. to N. H. State
Leonard, Frank	28	6	..	M.	..	..	American	Dec. 26, 1913	"	"
Côté, Adeline	67	11	17	..	F.	"	French	Mar. 6, 1914	"	"
Robinson, Lizzie	64	10	6	..	..	"	American	Mar. 19, 1914	"	"
Griffin, Margaret Daley	38	7	9	..	..	"	Irish	Mar. 20, 1914	Manchester.	"
McDermott, William	61	3	21	M.	F.	"	American	Mar. 26, 1914	Nashua.	"
Hasu, Mary	28	..	..	..	..	"	Finnish	April 1, 1914	Manchester.	"
Smith, Charles D	59	5	27	M.	..	"	Scotch	April 20, 1914	Manchester.	"
Martin, Samuel	55	1	25	..	..	"	French	May 26, 1914	Nashua.	"
Topping, Robert M	23	1	12	..	..	"	"	June 25, 1914	Manchester.	"
Collins, John H	67	11	23	..	..	"	American	July 1, 1914	"	"
Flanagan, Thomas	62	..	..	..	..	"	English	July 15, 1914	"	"
Moody, Charles H	65	10	29	..	..	B.	African	July 28, 1914	"	"
Boudreau, Rose	26	1	18	M.	F.	W.	French	July 28, 1914	"	"
Dailey, Joseph	43	..	..	..	..	"	Irish	Aug. 11, 1914	"	"
Haas, Olga	55	..	..	..	F.	"	Swiss	Aug. 17, 1914	Bennington.	"

Persons committed to the Cheshire County Asylum during the year ending August 31, 1914.

None.

Persons committed to the Sullivan County Asylum during the year ending August 31, 1914.

Drake, George	37	M.	W.	Single.....	American.....	June 3, 1914.	West Claremont.
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Persons committed to the Grafton County Asylum during the year ending August 31, 1914.

None.

Persons committed to the Coös County Asylum during the year ending August 31, 1914.

Jeffers, James.....	63	M.	W.	Widowed..	American.....	July 17, 1914	West Stewartstown.
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DISCHARGES.

1914.

TABLE NO. 5.—DISCHARGES.

Persons discharged from the New Hampshire State Hospital during the year ending August 31, 1914.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of discharge.	How long at institution.			Condition when discharged.
	Years.	Male.	Female.	Color.	Single, married or widowed.		Years.	Months.	Days.	
Wilson, Anna V.	50	.....	F.	W.	Married ..	Sept. 2, 1913	6	6	8	Much improved.
Wallace, Harriet L.	49	.....	"	"	" ..	Sept. 2, 1913	9	2	24	" [not return.
Lamprey, Almira A.	71	.....	"	"	" ..	Sept. 3, 1913	1	1	18	On trial. Improved. Did
Halpin, Kate.	20	.....	"	"	Single ..	Sept. 9, 1913	.....	7	.....	Recovered.
Persons, Beatrice	18	.....	"	"	" ..	Sept. 10, 1913	.....	2	2	"
Noyes, Margaret E.	68	.....	"	"	" ..	Sept. 10, 1913	.....	.....	.....	On trial.
Meek, Charles B.	29	M.	.....	"	Divorced..	Sept. 10, 1913	6	2	21	Recovered.
Brady, Edward	28	.....	.....	"	Single ..	Sept. 11, 1913	.....	1	2	"
Camp, Bertha E.	35	M.	F.	"	Married ..	Sept. 13, 1913	.....	1	3	" [holism.
Roy, Phillip	31	M.	.....	"	Single ..	Sept. 20, 1913	.....	1	23	"
Ripeau, Rose	23	.....	F.	"	" ..	Sept. 21, 1913	.....	2	28	" from acute alco-
Hurley, Albert G.	20	M.	.....	"	" ..	Sept. 22, 1913	.....	2	11	Much improved.
Morin, Cedulie	31	.....	F.	"	Married ..	Sept. 23, 1913	.....	2	2	Recovered.
Desmond, Patrick	48	M.	.....	"	Divorced..	Sept. 29, 1913	.....	4	17	"
Poulin, Joseph .....	..	.....	.....	"	" ..	Oct. 2, 1913	.....	.....	.....	Eloped.
Destrozier, or Deslong-	..	.....	.....	"	" ..	Oct. 3, 1913	.....	1	.....	Recovered from alcoholism.
champs, Alphonse.	48	"	.....	"	Widowed ..	Oct. 3, 1913	.....	1	19	Improved.
Hills, Addie F.	57	.....	F.	"	Single ..	Oct. 4, 1913	.....	4	17	Recovered.
Buckley, Nellie	37	.....	"	"	" ..	Oct. 4, 1913	.....	.....	.....	On a visit.
Steele, Carrie	38	.....	"	"	Married ..	Oct. 5, 1913	.....	.....	16	"
Gleason, Ida N.	60	M.	.....	"	" ..	Oct. 8, 1913	1	5	.....	Not improved.
Rice, Charles F.	16	"	.....	"	Single ..	Oct. 11, 1913	.....	2	19	Improved.
Beede, Fred C.	20	"	.....	"	" ..	Oct. 11, 1913	.....	4	12	Not improved.
Chouinard, Xavier	43	.....	F.	"	Married ..	Oct. 12, 1913	.....	6	14	Recovered.
Pippin, Georgianna	40	M.	.....	"	" ..	Oct. 18, 1913	.....	.....	.....	Eloped.
Simard, Paul E. ....	..	.....	F.	"	Single ..	Oct. 25, 1913	.....	8	25	Recovered.
Dillon, Catherine	44	.....	F.	"	" ..	Oct. 25, 1913	.....	.....	.....	"

Simard, Paul E.	21	M.	W.	Single	Canada	Oct.	25, 1913	9	9	Recovered.	[Not improved.
Prescott, Annie	33	..	..	..	New Hampshire.	Oct.	25, 1913	11	13	On a visit.	Did not return.
Foy, Annie B.	50	..	..	..	Canada	Oct.	26, 1913	8	16	Improved.	
Carter, Sarah	33	M.	..	Married	P. E. Island	Oct.	26, 1913	1	14	Recovered.	
LaBrecche, George	24	..	..	Single	New Hampshire.	Oct.	30, 1913	9	21	Improved.	[Holism.
Duke, Lewis	45	..	..	Married	Russia	Nov.	1, 1913	1	13	Recovered from acute alco-	
Lucas, Eva	24	..	..	Single	Canada	Nov.	2, 1913	4	13	Much improved.	
Brulott, Millie	19	..	..	..	..	Nov.	7, 1913	5	9	Recovered.	
Cromwell, Catherine	61	..	..	Married	..	Nov.	8, 1913	7	27	..	..
Connor, Patrick	53	M.	..	..	Ireland	Nov.	8, 1913	6	14	Much improved.	
Tombly, Georgia E.	44	..	..	Single	New Hampshire.	Nov.	11, 1913	6	11	..	..
Schneider, Elizabeth	47	..	..	Married	Massachusetts	Nov.	15, 1913	6	11	On trial.	[Improved.
Sturtevant, Simeon	36	M.	..	..	Vermont	Nov.	16, 1913	1	27	Did not return.	
Love, Fred A.	28	..	..	Single	New Hampshire.	Nov.	17, 1913	1	28	Not insane,	
Locke, Arthur L.	44	..	..	Married	..	Nov.	19, 1913	8	16	Improved.	
Galloway, Grace	28	..	..	..	New Hampshire.	Nov.	21, 1913	4	22	Recovered.	
Chapman, John	..	M.	..	..	..	Nov.	23, 1913	..	..	Eloped.	
Woods, George F.	..	..	..	..	..	Nov.	25, 1913	..	..	On a trial visit.	Temporary
Thorning, Hattie D.	64	..	..	..	..	Nov.	25, 1913	6	8	discharge.	Not improved.
Trovato, Augustino	38	M.	..	Widowed.	Vermont	Nov.	25, 1913	..	25	Improved.	
Drew, Mary A.	..	..	..	Married	Italy	Nov.	25, 1913	..	..	Much improved.	
Chisholm, Ethel	..	F.	..	..	..	Nov.	25, 1913	..	..	Eloped.	
White, Etie M.	56	..	..	..	..	Nov.	26, 1913	..	..	On a visit.	
Jewell, Emma L.	51	..	..	Married	New Hampshire.	Nov.	26, 1913	3	29	Improved.	
Boyd, Hattie F.	..	..	..	Divorced.	..	Nov.	27, 1913	1	4	Recovered.	
Wells, Frank E.	52	..	..	..	..	Nov.	27, 1913	..	..	On a visit.	
Gryncewicz, John	37	M.	..	Married	New Hampshire.	Nov.	29, 1913	2	18	Much improved.	[Holism.
Carter, James	60	..	..	Single	Russia	Nov.	29, 1913	..	24	Recovered from acute alco-	
Krowczyk, Joseph	40	..	..	Widowed	..	Dec.	4, 1913	1	27	Improved.	
Spead, Arthur B.	28	..	..	Single	Poland	Dec.	5, 1913	1	5	Recov. fr'm acute alcoholism.	
Iszyk, Wicenty	39	..	..	..	New Hampshire.	Dec.	9, 1913	..	5	Much improved.	
Ferreira, Dioga	29	..	..	Married	Poland	Dec.	10, 1913	2	16	Recovered.	
Belleau, Albia L.	19	..	..	..	Portugal	Dec.	15, 1913	5	19	Recovered.	
Chisholm, Ethel	..	F.	..	..	New Hampshire.	Dec.	18, 1913	2	9	Improved.	
Caswell, George B.	26	..	..	..	..	Dec.	20, 1913	..	24	On a visit.	
Turner, Emma A.	33	M.	..	Single	New Hampshire.	Dec.	20, 1913	6	17	Much improved.	
Berry, Ernest H.	32	..	..	Married	Canada	Dec.	20, 1913	1	16	Improved.	
Dunham, Ruth C.	21	M.	..	Single	New Hampshire.	Dec.	21, 1913	3	13	..	..
Pickard, Chester	24	..	..	Married	..	Dec.	22, 1913	6	13	..	..
Blodgett, George S.	..	M.	..	..	Massachusetts	Dec.	22, 1913	5	8	Much improved.	
Sullivan, Mary A.	..	..	..	..	..	Dec.	24, 1913	..	..	On a visit.	
Dufour, Ernestine	22	F.	..	..	Canada	Dec.	24, 1913	..	16	Recovered.	
Libby, Forrest B.	23	M.	..	Married	New Hampshire.	Dec.	25, 1913	1	18	Not improved.	

TABLE NO. 5.—Continued.—DISCHARGES.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of discharge.	How long at institution.			Condition when discharged.
	Years.	Male.	Female.	Color.	Single, married or widowed.		Years.	Months.	Days.	
Sullivan, J. Henry	41	M.	.....	W.	Married ..	Maine.....	1	1	23	Improved.
Wilkins, William H.	43	"	.....	"	Widowed ..	New Brunswick.	8	11	12	Recovered.
Bailey, Muriel	43	"	F.	"	Married ..	Egypt .....	.....	.....	22	Improved.
Johnson, Alice	26	"	"	"	Single	United States ..	.....	7	2	On a visit. [Improved.
Chasse, Eusebe	45	M.	.....	"	Married ..	Canada .....	.....	11	15	Recovered. Did not return.
White, Frank P.	58	"	.....	"	" .....	New Hampshire.	.....	.....	23	Recovered.
Burniche, Lucie	40	"	F.	"	"	Canada .....	.....	4	17	Not insane.
Breton, Ezilda	48	"	.....	"	" .....	Ireland.....	1	3	2	Not improved,
O'Connell, Michael	33	M.	.....	"	Single	Jan. 16, 1914 ..	.....	.....	23	Recovered.
Hale, Charles R.	45	"	F.	"	Married ..	Jan. 19, 1914 ..	1	7	26	"
Bateholder, Inez.....	31	"	.....	"	" .....	Jan. 23, 1914 ..	.....	7	.....	.....
Bickford, Elizabeth	33	"	"	"	"	Jan. 24, 1914 ..	.....	.....	14	Improved. [Not improved.
Stoddard, Delia F.	44	"	"	"	"	Jan. 25, 1914 ..	.....	1	19	Did not return from visit.
Fortur, Albert	22	M.	.....	"	Single	Feb. 5, 1914 ..	.....	1	17	Improved.
Riley, James	46	"	.....	"	Married ..	Feb. 7, 1914 ..	3	11	21	Recovered.
Little, Mae	22	"	F.	"	Single	Feb. 13, 1914 ..	.....	2	2	Not insane.
Alexander, John	48	M.	.....	"	Single	Feb. 17, 1914 ..	2	2	15	Not improved.
Chandler, Bertha	24	"	"	"	"	Feb. 19, 1914 ..	1	3	7	Improved.
Leaman, Florence	30	"	F.	"	Married ..	Feb. 21, 1911 ..	.....	.....	3	[holism.
Cowett, Frank	44	M.	.....	"	Single	Feb. 21, 1914 ..	.....	2	15	Recovered from acute alco-
Balcom, Fred M.	51	"	"	"	Married ..	Feb. 23, 1914 ..	.....	2	15	Improved.
Leonard, Frank	28	"	F.	"	Single	Feb. 25, 1914 ..	.....	1	28	Not improved.
Noury, Alphonine	30	"	.....	"	Single	Mar. 4, 1914 ..	.....	3	21	Recovered.
Nichols, Nellie I.	50	"	"	"	Married ..	Mar. 6, 1914 ..	.....	4	3	Improved.
Fletcher, Warren G.	67	M.	.....	"	Widowed ..	Mar. 7, 1914 ..	.....	1	18	On a visit.
Lasage, Oscar .....	..	"	F.	"	"	Mar. 8, 1914 ..	.....	.....	.....	.....
Chisholm, Ethel D. ....	..	"	"	"	" .....	Mar. 8, 1914 ..	.....	4	6	Improved.
Emerson, Edgar W.	58	M.	.....	"	Single	Mar. 9, 1914 ..	.....	6	1	Recurrent recovery.
Hoyt, George S.	59	"	.....	"	Married ..	.....	.....	.....	.....	.....

Rand, Henry A.....	42	M.	.....	W.	Single	New Hampshire.	Mar.	9, 1914	.....	2	Not improved.
Gifford, Erwin J.....	34	"	.....	"	Married	Canada	Mar.	9, 1914	.....	7	Not insane.
Baltan, Leon	41	"	F.	"	Single	Syria	Mar.	11, 1914	.....	26	Improved.
Whitman, Gertrude.....	17	"	"	"	Divorced.	New Hampshire.	Mar.	12, 1914	.....	7	Not improved.
Conway, Mary	20	"	"	"	Single	"	Mar.	14, 1914	.....	12	On a visit. Did not return.
Batchelder, Frank G....	..	M.	.....	"	.....	.....	Mar.	15, 1914	.....	..	Much improved.
Davidson, Flora	47	"	F.	"	Single	New Hampshire.	Mar.	15, 1914	2	22	On a visit.
Folsom, John D.....	64	M.	.....	"	Divorced.	"	Mar.	20, 1914	2	21	Much improved.
Hills, Morris	40	"	"	"	Married	"	Mar.	21, 1914	5	3	Not improved.
McKay, Eliza	39	"	F.	"	Widowed	"	Mar.	22, 1914	.....	1	Improved.
Sullivan, Hildegard....	39	M.	.....	"	Single	Ireland	Mar.	26, 1914	.....	7	Recovered.
Wilson, Harry .....	..	"	"	"	.....	.....	Mar.	26, 1914	.....	1	Not improved.
Mader, Catherine	40	"	"	"	Married.	Canada	Mar.	28, 1914	.....	1	Eloped.
Young, Ida W.....	30	"	F.	"	.....	.....	Mar.	28, 1914	.....	28	Recovered.
Johnson, Jack	18	M.	.....	"	Single	Massachusetts...	Mar.	31, 1914	2	1	Much improved.
Varney, Charles	18	"	"	"	.....	New Hampshire.	Mar.	31, 1914	4	7	Much improved.
Gray, Eliza A.....	50	"	F.	"	"	"	Mar.	31, 1914	.....	1	Not insane.
Ruel, Joseph	38	M.	.....	"	Widowed	Canada	Mar.	31, 1914	6	1	"
Piper, Nettie C.....	45	"	F.	"	Single	New Hampshire.	Mar.	31, 1914	2	23	"
Sampson, Frank	36	M.	.....	"	Married	New Hampshire.	Mar.	31, 1914	.....	5	Much improved.
Woods, George F.....	64	"	"	"	.....	.....	Mar.	31, 1914	.....	13	Improved.
Sullivan, Mary A.....	..	"	F.	"	.....	.....	Mar.	31, 1914	.....	19	On a visit.
Chisholm, Ethel D....	..	"	"	"	Single	United States...	Mar.	31, 1914	.....	..	"
McDuffee, Alice	40	"	"	"	.....	New Hampshire	Mar.	31, 1914	1	18	Recurrent recovery.
Corbett, Frank	34	M.	.....	"	Single	"	Mar.	31, 1914	.....	6	Recovered.
Delorey, Margaret....	20	"	F.	"	"	Canada	Mar.	31, 1914	1	28	Much improved.
Howe, Esther	27	"	"	"	Married	Maine	Mar.	31, 1914	2	14	"
Carr, Stillman G.....	32	M.	.....	"	"	" .....	Mar.	31, 1914	.....	2	"
White, Mary C. V.....	..	"	F.	"	Single	New Hampshire.	Mar.	31, 1914	1	10	On a visit.
Forsyth, John L.....	58	M.	.....	"	.....	.....	Mar.	31, 1914	.....	1	On trial at home. Did not return.
Manley, Myrtle	17	"	F.	"	"	"	Mar.	31, 1914	.....	18	Improved.
Runnells, Harrison....	51	M.	.....	"	Married	.....	Mar.	31, 1914	3	22	On trial at home. Did not return.
Story, Sophronia E....	..	"	F.	"	.....	.....	Mar.	31, 1914	.....	..	Improved.
Moxley, Etta B.....	..	"	"	"	.....	.....	Mar.	31, 1914	.....	..	On trial at home.
Pickering, Juba E....	27	M.	.....	"	Single	Rhode Island...	Mar.	31, 1914	.....	1	Recovered.
Pelkey, Ellen L.....	64	"	F.	"	Married	Ireland	Mar.	31, 1914	6	18	On trial at home. Did not return.
Goldthwait, Ephrien J..	64	M.	.....	"	Widowed	Maine	Mar.	31, 1914	.....	24	Improved.
Jenness, Arthur M.....	21	"	"	"	Single	New Hampshire	Mar.	31, 1914	3	9	Recovered from acute alcoholism.
Carr, Olive	47	"	F.	"	Married	Massachusetts...	Mar.	31, 1914	6	21	Not improved.
Crowley, John	74	M.	.....	"	Single	P. E. Island	Mar.	31, 1914	8	4	Recovered.

TABLE NO. 5.—Continued.—DISCHARGES.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of discharge.	How long at institution.			Condition when discharged.
	Years.	Male.	Female.	Color.	Single, married or widowed.		Years.	Months.	Days.	
Harty, David.....	72	M.	F.	W.	Single	Ireland.....	1	6	3	Recovered.
Leaman, Florence.....	30	M.	F.	"	Married	Pennsylvania.....	2	1	26	Much improved.
Cournoyer, Arthur.....	38	"	"	"	"	New Hampshire.....	2	2	16	Recovered.
Constantino, James.....	33	"	"	"	"	Italy.....	6	6	18	Not improved.
Moxley, Etta B.....	53	"	F.	"	"	Vermont.....	"	"	"	Improved.
Brennan, Daniel.....	"	M.	"	"	Married	New Hampshire.....	"	"	21	Eloped.
Kimball, Jonathan E.....	68	"	"	"	Widowed.	Canada.....	6	6	1	Not improved.
Deschaine, Archille.....	74	"	"	"	Married	Maine.....	1	"	17	Improved.
Chisholm, Ethel.....	26	"	F.	"	Single	Vermont.....	"	23	9	Recurrent recovery.
Johnson, Grace.....	26	M.	"	"	"	New Hampshire.....	1	8	13	Recovered.
Gilmartin, Patrick J.....	25	"	F.	"	"	"	1	8	13	On trial visit. Did not return.
Ward, Minnie.....	47	"	"	"	"	"	1	8	13	Not improved.
Addelson, David.....	18	M.	"	"	Single	British Columbia.....	1	5	15	Recovered.
Nadeau, Elude.....	59	"	"	"	Married	Canada.....	7	7	7	Improved.
Purnfort, Elizabeth.....	54	"	F.	"	Single	New Hampshire.....	10	10	12	Recurrent recovery. [Holism.
Belanger, Joseph.....	27	M.	"	"	Married	Canada.....	"	11	11	Recovered from acute alco-
Adams, Hazel M.....	11	"	F.	"	Single	New Hampshire.....	2	2	9	On trial. Improved.
Smith, Ernest E.....	52	M.	"	"	"	"	1	1	16	Much improved.
Moxley, Etta B.....	53	"	F.	"	Married	Vermont.....	"	8	8	Not improved.
Putney, Carrie.....	56	"	"	"	Divorced.	New Hampshire.....	6	6	16	On a visit. Did not return.
Wilson, Harry.....	"	M.	"	"	"	"	"	"	"	Not improved.
Provenche, Josephine.....	30	"	F.	"	Single	Canada.....	1	1	21	Eloped.
Jones, Willoughby.....	23	M.	"	"	"	England.....	10	10	13	Recovered.
Johnson, Arthur.....	27	"	"	"	Married	New Hampshire.....	9	9	16	Not improved.
Lasage, Oscar.....	"	"	"	"	"	"	"	"	"	On trial visit. [Improved.
Macek, Albert.....	20	"	"	"	Single	Poland.....	4	4	5	Eloped. Did not return. Not
Norsiffe, Cheriffe.....	24	"	"	"	"	Syria.....	2	9	11	Recovered.

King, Ada L.....	54	M.	F.	W.	Widowed.	New York	June 15, 1914	11	8	Recovered.
Tucker, James	56	M.	F.	"	Married ..	Massachusetts ..	June 16, 1914	2	7	6	Recurrent recovery.
Moore, Hattie A.....	55	M.	F.	"	"	New Hampshire ..	June 16, 1914	2	17	17	Improved. [Improved.
Boudreau, Frank	52	"	"	"	"	Canada	June 19, 1914	1	7	7	Eloped. Did not return. Not
Filippula, John	64	"	"	"	Widowed.	Finland	June 20, 1914	10	13	Improved. [Improved.
Boncher, Frederick	34	"	"	"	Married ..	Maine	June 21, 1914	3	8	Eloped. Did not return. Im-
Wilson, Theresa	39	"	F.	"	"	Ireland	June 23, 1914	10	8	Improved.
Robinson, Florence	40	"	"	"	Single	New Hampshire ..	June 25, 1914	3	18	On a visit. Did not return.
Jones, Clara	40	"	"	"	"	"	June 26, 1914	7	8	Recurrent recovery.
Johnson, Etta	44	"	"	"	Married ..	Vermont	June 27, 1914	2	6	Recovered from alcoholism.
Gosley, Mary	33	"	"	"	"	Canada	June 28, 1914	2	29	"
Noel, Ovide	37	M.	"	"	"	New Hampshire ..	July 1, 1914	3	28	[Recovered.
Cannon, John	60	"	"	"	Single	"	July 3, 1914	7	11	On trial. Did not return.
Moulton, Howard	17	"	"	"	Single	Ireland	July 5, 1914	3	29	On a visit. [covered.
Gage, Charles S.....	45	"	F.	"	Single	"	July 7, 1914	3	29	Much improved, possibly re-
Dillon, Catherine	45	"	"	"	Married ..	Vermont	July 20, 1914	8	2	Recovered. [Not improved.
Page, Ethie L.....	50	"	"	"	Married ..	Rhode Island	July 23, 1914	2	25	On a visit. Did not return.
Johnson, Frank	28	"	F.	"	"	"	July 25, 1914	3	22	[holism.
Fitz, John L.....	35	M.	"	"	Single	New Hampshire ..	July 25, 1914	6	25	Recovered from acute alco-
Tatten, Honor	50	"	F.	"	Married ..	Vermont	July 27, 1914	2	15	"
Ingraham, Florence	35	M.	"	"	Single	New Hampshire ..	July 29, 1914	7	5	Much improved.
Ducey, John	46	"	"	"	Married ..	"	Aug. 4, 1914	1	24	Recovered.
Hatch, Ella	42	"	"	"	Widowed.	New Hampshire ..	Aug. 4, 1914	1	26	"
Temney, Charles A	49	"	"	"	Married ..	"	Aug. 4, 1914	1	25	On a visit.
Lapane, Dolor	26	"	"	"	"	"	Aug. 4, 1914	1	25	Eloped.
Thompson, Florence	42	"	"	"	"	Germany	Aug. 5, 1914	7	12	Recovered.
Barney, Lizzie	49	"	"	"	"	Maine	Aug. 6, 1914	10	5	Much improved. [holism.
Dymont, Evelyn K.....	26	"	"	"	"	Pennsylvania ..	Aug. 6, 1914	2	8	Recovered from acute alco-
Dolloff, Alice	31	M.	"	"	Single	"	Aug. 7, 1914	1	25	On a visit. [Did not return.
Chapman, John H.....	61	"	"	"	Married ..	New Hampshire ..	Aug. 8, 1914	1	25	On trial. Much improved.
Knoetig, Herman	31	"	"	"	"	"	Aug. 8, 1914	1	23	On a visit.
Hustus, James H.....	41	"	"	"	Married ..	Ireland	Aug. 8, 1914	1	23	Recovered.
Youst, Edward	61	"	"	"	Single	Ireland	Aug. 14, 1914	1	23	Much improved. [Improved.
Ingraham, Florence	53	M.	F.	"	Married ..	Canada	Aug. 15, 1914	2	12	Eloped. Not returned. Not
Nichols, Alphonsse	45	"	"	"	"	England	Aug. 16, 1914	2	13	On a visit, but not returned.
Healey, Ann	46	"	"	"	"	Massachusetts ..	Aug. 19, 1914	2	24	Not improved. [Improved.
Leonard, Henry C.....	45	"	"	"	Single	"	Aug. 19, 1914	3	28	On a visit and not returned.
Finley, Abbie	46	"	"	"	"	"	Aug. 19, 1914	3	26	Much improved.
Beech, Edgar	40	"	"	"	"	"	Aug. 19, 1914	3	26	"
Corson, Eva M.....	57	"	"	"	"	"	Aug. 19, 1914	3	26	"
Carr, Stillman G.....	32	M.	"	"	Married ..	Maine	Aug. 19, 1914	3	28	On a visit and not returned.
Hubble, William	24	"	"	"	Single	New Hampshire ..	Aug. 19, 1914	3	26	Much improved.

TABLE NO. 5.—Continued.—DISCHARGES.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of discharge.	How long at institution.			Condition when discharged.
	Years.	Male.	Female.	Color.			Years.	Months.	Days.	
Moore, Thomas	81	M.	...	W.	England	Aug. 22, 1914	...	1	25	[Improved.
McCollister, Sarah	72	...	F.	"	New Hampshire.	Aug. 23, 1914	...	10	6	On a visit and not returned.
Kugler, Eleanor	33	...	"	"	South America.	Aug. 24, 1914	1	1	28	Much improved.
Robinson, Florence	60	M.	...	"	Vermont.	Aug. 24, 1914	12	4	30	[Improved.
Hartshorn, Harry A.	47	"	...	"	Massachusetts.	Aug. 25, 1914	...	..	22	On a visit and not returned.
Corbin, Edward C.	43	"	...	"	New Hampshire.	Aug. 26, 1914	...	..	16	[Recovered.
Hutton, Elta	26	...	F.	"	New Hampshire.	Aug. 26, 1914	...	3	18	On trial and not returned.
Haley, Elvira	52	M.	...	"	Nova Scotia.	Aug. 27, 1914	2	..	27	Recovered.
Marcoux, Arthur .....	...	M.	...	"	Russia.	Aug. 28, 1914	...	..	..	Much improved.
Matesik, Celja	38	...	F.	"	New Hampshire.	Aug. 28, 1914	...	4	12	On a visit.
Weymouth, Henry G.	24	M.	...	"	New Hampshire.	Aug. 31, 1914	...	3	..	Improved.
Persons discharged from the Rockingham County Asylum during the year ending August 31, 1914.										
Dow, Annie	70	...	F.	W.	American	Aug. 11, 1914	1	..	..	Taken to State Hospital.
Chapman, William	33	M.	...	"	"	Nov. 18, 1913	...	4	..	"
Smith, Bessie	32	...	F.	"	"	Nov. 13, 1913	1	..	..	"
Persons discharged from the Strafford County Asylum during the year ending August 31, 1914.										
Hoit, Joseph	60	M.	...	W.	American	June 2, 1914	...	2	6	Insane.

Persons discharged from the Belknap County Asylum during the year ending August 31, 1914.

Fifield, Harriett	78	F.	W.	Single	American	Oct. 29, 1913	29	..	..
Jewell, Emma	57	.....	.....	.....	.....	April 10, 1914	....	..	10

Persons discharged from the Carroll County Asylum during the year ending August 31, 1914.

None.

Persons discharged from the Merrimack County Asylum during the year ending August 31, 1914.

None.

Persons discharged from the Hillsborough County Asylum during the year ending August 31, 1914.

Bjorkland, Carl	65	M.	W.	Widowed .	Swedish	Sept. 16, 1913	2	10	20	Transfer'd to State Hospital.
Harrington, Albert	43	"	"	Married .	French	Sept. 26, 1913	....	4	2	"
Jones, George T.	53	.....	" .....	Widowed .	American	Nov. 4, 1913	15	9	17	"
Champagne, Philomene	71	.....	F.	Single	French	Nov. 12, 1913	11	6	16	"
Hamel, Minnie	19	.....	" .....	.....	" .....	Jan. 15, 1914	3	9	26	"
Ducey, John	35	M. ....	.....	.....	American	April 29, 1914	....	7	29	"

Persons discharged from the Cheshire County Asylum during the year ending August 31, 1914.

Brown, Thomas	82	M.	W.	Widowed .	Irish	June 13, 1914	13	..	..	Suicidal.
Boccia, Luccia	26	.....	.....	Married ..	Italian	May 8, 1914	....	..	..

TABLE NO. 5.—Continued.—DISCHARGES.

Persons discharged from the Sullivan County Asylum during the year ending August 31, 1914.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of discharge.	How long at institution.			Condition when discharged.
	Years.	Male.	Female.	Color.	Single, married or widowed.		Years.	Months.	Days.	
Drake, George	37	M.	.....	W.	Single ..	July 12, 1914	.....	1	14	Much better. Went home.
Roberson, Laura	71	.....	F.	"	"	Oct. 11, 1913	.....	8	..	Better.

Persons discharged from the Grafton County Asylum during the year ending August 31, 1914.

None.

Persons discharged from the Coös County Asylum during the year ending August 31, 1914.

None.

DEATHS.

1914.

TABLE NO. 6.—DEATHS.

Persons who died at the New Hampshire State Hospital during the year ending August 31, 1914.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of death.	Cause of death.
	Years.	Male.	Female.	Color.	Single, married or widowed.		
Suzor, Mina.....	27	.....	F.	W.	Single.....	Sept. 1, 1913	Intestinal obstruction.
Bell, Charlotte A.....	37	.....	"	"	"	Sept. 12, 1913	Cerebral hemorrhage.
Irvine, James B.....	30	M.	.....	"	"	Sept. 17, 1913	Paresis.
Ellard, Kathleen.....	42	.....	F.	"	Married...	Sept. 18, 1913	Exhaustive psychosis.
Hazelton, Belle.....	53	.....	"	"	Single.....	Sept. 18, 1913	Chronic nephritis.
Roberts, Daniel.....	86	M.	.....	"	Married...	Sept. 19, 1913	Chronic interstitial nephritis.
Kelley, Celia.....	71	.....	F.	"	Widowed.	Sept. 20, 1913	Cancer of ascending colon.
Clark, John T.....	82	M.	.....	"	"	Sept. 20, 1913	Cerebral hemorrhage.
Fisher, George W.....	65	.....	F.	"	Married...	Sept. 21, 1913	Cardiac embolism.
Trow, Carrie F.....	52	.....	"	"	"	Sept. 28, 1913	Cerebral hemorrhage.
Horan, Ellen.....	48	.....	"	"	"	Sept. 28, 1913	Intestinal obstruction.
Vennard, John L.....	74	M.	.....	"	Single.....	Oct. 1, 1913	Exhaustion in senile dementia.
Pincence, Urie.....	51	"	.....	"	Married...	Oct. 5, 1913	Cerebral hemorrhage.
Hebert, Napoleon.....	56	"	.....	"	"	Oct. 8, 1913	"
Baker, Helen M.....	74	.....	F.	"	"	Oct. 9, 1913	Exhaustion in senile dementia.
Bean, Augustus.....	86	M.	.....	"	Widowed.	Oct. 13, 1913	Cerebral hemorrhage.
Harriman, Florin.....	65	"	.....	"	Single.....	Oct. 13, 1913	Mitral insufficiency.
Haynes, Justin.....	72	"	.....	"	Widowed.	Oct. 18, 1913	Arteriosclerosis.
Dunne, James H.....	54	"	.....	"	Married...	Oct. 18, 1913	Chronic interstitial nephritis.
Shorett, Della.....	61	.....	F.	"	Widowed.	Oct. 19, 1913	Simple enteritis.
Raymond, Rose.....	81	"	.....	"	"	Oct. 21, 1913	Exhaustion in senile dementia.
Buckley, Thomas.....	64	"	.....	"	Married...	Oct. 23, 1913	Cerebral hemorrhage.
Knight, William A.....	54	"	.....	"	Single.....	Oct. 28, 1913	"
Eligian, John.....	62	"	.....	"	Widowed.	Oct. 29, 1913	"
Jenness, George H.....	79	"	.....	"	Married...	Nov. 2, 1913	Exhaustion in senile dementia.
Stone, James G.....	69	"	.....	"	"	Nov. 8, 1913	Acute indigestion.
Rich, Henry.....	79	"	.....	"	"	Nov. 8, 1913	Chronic interstitial nephritis.

62	Hayes, Charles H.	M.	...	W.	Married...	New Hampshire.	Nov. 8, 1913	Cardiac dropsy.
33	Boynton, Rachel.	...	F.	"	"	"	Nov. 10, 1913	Acute gastritis and enteritis.
97	Driscoll, Bridget.	M.	"	"	Widowed.	Ireland.	Nov. 10, 1913	Valvular disease of the heart.
76	Fox, Asa A.	M.	"	"	Married.	New Hampshire.	Nov. 11, 1913	Chronic interstitial nephritis.
56	Baker, William.	"	"	"	Single.	"	Nov. 12, 1913	Arteriosclerosis.
57	Ricker, Charles H.	"	F.	"	Married.	"	Nov. 19, 1913	Cerebral hemorrhage.
56	Carpenter, Emma G.	...	"	"	"	United States...	Nov. 20, 1913	Exhaustion in involutional melanc[olia].
67	Mullen, Mary.	...	"	"	Single.	Ireland.	Nov. 21, 1913	Diarrhœa and enteritis.
22	Coté, Celena.	M.	"	"	"	New Hampshire.	Nov. 23, 1913	Exhaustion in acute mania.
52	O'Connell, Dennis.	...	F.	"	"	Cape Breton.	Nov. 24, 1913	Pulmonary tuberculosis.
83	Bixby, Elisabeth.	M.	"	"	"	New Hampshire.	Nov. 28, 1913	Hypostatic pneumonia.
73	Guerin, Edward.	M.	"	"	Widowed.	Canada.	Dec. 7, 1913	Arteriosclerosis.
80	Webster, Cleora A.	...	F.	"	Married.	New Hampshire.	Dec. 10, 1913	Valvular disease of heart.
68	Lee, Kate.	...	"	"	"	Ireland.	Dec. 14, 1913	Exhaustion in senile dementia.
89	Foot, Bridget.	...	"	"	"	"	Dec. 14, 1913	Interstitial nephritis.
89	Grenier, Marie R. D., or Rosalind Russell.	...	"	"	Single.	New Hampshire.	Dec. 16, 1913	"
41	Farmilac, William H.	M.	"	"	"	"	Dec. 20, 1913	Uramic convulsions.
35	Powers, Stephen O.	...	"	"	Married.	Massachusetts.	Dec. 21, 1913	Exhaustive psychosis.
78	Darling, James P.	"	"	"	Widowed.	Vermont.	Dec. 22, 1913	Arteriosclerosis.
76	Burbank, Frank.	"	"	"	Divorced.	New Hampshire.	Dec. 22, 1913	Chronic interstitial nephritis.
43	Davis, Charles F.	"	"	"	Single.	"	Dec. 24, 1913	Epilepsy.
57	Fifield, Harriet.	...	"	"	Widowed.	"	Dec. 25, 1913	Cerebral hemorrhage.
78	Pierce, Edwin.	M.	F.	"	Single.	"	Dec. 31, 1913	Arteriosclerosis.
53	Avery, Everett.	"	"	"	"	"	Jan. 4, 1914	Exhaustive psychosis.
35	Kidder, William H.	...	"	"	"	"	Jan. 7, 1914	Gastric ulcer.
65	Benoit, Mary.	"	"	"	Widowed.	United States...	Jan. 10, 1914	Dementia in organic brain disease.
60	Burke, Herbert S.	M.	F.	"	Single.	Canada.	Jan. 11, 1914	Pulmonary tuberculosis.
41	Perham, Robert C.	"	"	"	"	New Hampshire.	Jan. 11, 1914	Suicide.
23	Sleeper, Ned S.	"	"	"	"	United States.	Jan. 15, 1914	"
39	Ray, Orrin B.	"	"	"	Married.	New Hampshire.	Jan. 18, 1914	Lobar pneumonia.
68	Dow, John G.	"	"	"	"	"	Jan. 19, 1914	Paresis.
61	McDonald, Nellie E.	...	"	"	Widowed.	Vermont.	Jan. 19, 1914	Dementia from organic brain disease.
36	Holden, George W.	M.	F.	"	Divorced.	New Hampshire.	Jan. 21, 1914	Chronic interstitial nephritis.
81	White, Julia.	M.	F.	"	Widowed.	Vermont.	Jan. 26, 1914	Paresis.
77	Good, James.	M.	"	"	Single.	New Hampshire.	Jan. 27, 1914	Exhaustion in senile dementia.
70	O'Neil, Hannah.	...	"	"	"	United States.	Jan. 27, 1914	Lobar pneumonia.
70	Ward, William H.	M.	"	"	Widowed.	Province Quebec.	Jan. 28, 1914	Cerebral hemorrhage.
80	Longval, Olivia J.	"	"	"	"	New Hampshire.	Jan. 29, 1914	Tonsillitis.
43	Hutchins, George C.	"	"	"	Single.	Massachusetts.	Feb. 4, 1914	Arteriosclerosis.
66	Garland, Dexter.	"	"	"	Widowed.	Canada.	Feb. 4, 1914	Paresis.
43	Morin, Henry.	"	"	"	"	"	Feb. 6, 1914	Chronic interstitial nephritis.
56	Proulx, Mary.	...	F.	"	Single.	"	Feb. 6, 1914	Cerebral hemorrhage.
56		...	"	"	Divorced.	"	Feb. 7, 1914	Paresis.
		...	"	"	"	"		Organic dementia.

TABLE NO. 6.—Continued.—DEATHS.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of death.	Cause of death.
	Years.	Male.	Female.	Color.			
McCrillis, Elizabeth C....	91	.....	F.	W.	Maine.....	Feb. 9, 1914	Arteriosclerosis.
Snowdon, Henry.....	54	M.	.....	"	New Hampshire.....	Feb. 15, 1914	Acute gastro-enteritis.
Wheeler, Leverett.....	72	"	.....	"	United States....	Feb. 15, 1914	Mitral regurgitation.
Kelliher, Mary.....	70	.....	F.	"	Ireland.....	Feb. 22, 1914	Septic pericarditis and lobar pneumonia
McLaughlin, Mary.....	62	.....	"	"	.....	Feb. 25, 1914	Tuberculous pleurisy.
Parker, Edward O.....	66	M.	.....	"	Massachusetts....	Mar. 1, 1914	Paresis (cerebral hemorrhage.)
Drew, George H.....	39	"	.....	"	New Hampshire.	Mar. 7, 1914	Paresis.
Kendrick, John.....	75	"	.....	"	"	Mar. 15, 1914	Mitral regurgitation.
Brown, Bonavista.....	65	.....	F.	"	Finland.....	Mar. 29, 1914	Cerebral hemorrhage.
Hasu, Mary.....	28	.....	"	"	Canada.....	April 1, 1914	Acute dilatation of heart.
Bergeron, Frank.....	40	M.	.....	"	"	April 11, 1914	Paresis.
Cloutier, Lucie.....	64	.....	F.	"	New Hampshire.	April 11, 1914	Mitral regurgitation.
Twombly, Chester A.....	65	M.	.....	"	Vermont.....	April 11, 1914	Arteriosclerosis.
Bixby, Martin J.....	72	"	.....	"	New York.....	April 17, 1914	Cerebral hemorrhage.
White, Myra M.....	68	.....	F.	"	Maine.....	April 18, 1914	Intestinal obstruction.
Bryson, Thomas.....	54	M.	.....	"	New Hampshire.	April 21, 1914	Arteriosclerosis.
Nichols, George.....	62	"	.....	"	California.....	April 24, 1914	Endocarditis.
Rice, Harry.....	40	"	.....	"	New Hampshire.	April 25, 1914	Acute enteritis.
Wilson, Hiram P.....	55	"	.....	"	"	April 26, 1914	Diabetic coma.
Borden, Martin E.....	57	"	.....	"	Ireland.....	April 26, 1914	Exhaustive psychosis.
Gray, Enoch.....	69	.....	F.	"	Canada.....	April 30, 1914	Arteriosclerosis.
Moulton, Eleanor J.....	64	.....	"	"	New Hampshire.	April 30, 1914	Septic meningitis.
Haulin, Clara.....	38	.....	"	"	Scotland.....	May 6, 1914	Acute enteritis.
Turcotte, Edward E.....	31	M.	.....	"	New Hampshire.	May 11, 1914	General tuberculosis.
Riley, Ellen.....	80	.....	F.	"	New Hampshire.	May 13, 1914	Arteriosclerosis.
Dunklee, Elizabeth P....	80	.....	"	"	Canada.....	May 12, 1914	"
Burneche, Lucie.....	41	M.	.....	"	New Hampshire.	May 14, 1914	General paresis.
Gaffney, Thomas F.....	39	.....	"	"	Canada.....	May 17, 1914	Pericarditis.
Carron, Francois.....	77	.....	"	"	Canada.....	May 27, 1914	Erysipelas.

Fales, Edward F.....	60	M.	.....	W.	.....	Married ..	Vermont.....	May	27, 1914	Chronic interstitial nephritis.
Bodge, Lois E.....	47	M.	F.	"	.....	"	Canada	May	28, 1914	Cerebral hemorrhage.
Brown, Alfred H.....	42	"	.....	"	.....	Single ..	New Hampshire.	June	1, 1914	Broncho pneumonia.
Smith, Charles D.....	58	"	.....	"	.....	Married ..	Maine.....	June	7, 1914	Cerebral hemorrhage.
St. Cyr, Napoleon.....	44	"	.....	"	.....	Widowed.	Canada	June	10, 1914	Paresis.
Côté, Adeline.....	30	"	F.	"	.....	"	"	June	11, 1914	Cerebral hemorrhage.
Fitzgerald, Catherine.....	71	M.	.....	"	.....	Married ..	Ireland	June	12, 1914	Myocarditis.
Daniels, George J.....	64	M.	F.	"	.....	"	New Hampshire.	June	24, 1914	Tuberculosis of lungs.
Madden, Fanny A.....	38	"	.....	"	.....	Widowed.	Sweden	June	25, 1914	Paresis.
Bjorkland, Carl.....	67	M.	.....	"	.....	"	Illinois.....	July	1, 1914	Pneumonia.
Loneragan, Thomas	43	"	.....	"	.....	Married ..	New Hampshire.	July	12, 1914	Pellagra.
Gorrell, Albert.....	39	"	F.	"	.....	Widowed.	"	July	15, 1914	Paresis.
Maynard, Miriam H.....	77	M.	.....	"	.....	"	"	July	21, 1914	Heat exhaustion.
Knowles, Nathaniel.....	54	"	F.	"	.....	Married ..	Canada	July	23, 1914	Acute dysentery and enteritis.
Dion, Philanise.....	39	M.	.....	"	.....	"	New Hampshire.	July	25, 1914	Pellagra.
Kimball, Jonathan E.....	68	M.	.....	"	.....	"	Vermont.....	July	29, 1914	"
Garland, Carotte E.....	66	M.	F.	"	.....	"	New Hampshire.	July	30, 1914	Mitral regurgitation.
Ginness, Charles G.....	70	"	.....	"	.....	"	"	Aug.	7, 1914	Lobar pneumonia.
Walker, Benjamin.....	67	"	F.	"	.....	"	"	Aug.	10, 1914	Chronic interstitial nephritis.
Strong, Ida C.....	42	M.	.....	"	.....	"	New York.....	Aug.	11, 1914	Exhaustive psychosis.
Moody, Charles H.....	67	"	.....	"	.....	Single ..	Pennsylvania.....	Aug.	12, 1914	Pyonephrosis.
Berry, William W.....	68	"	.....	"	.....	Married ..	Canada	Aug.	13, 1914	Cerebral hemorrhage.
Champion, Rose.....	56	"	F.	"	.....	Widowed.	New Hampshire.	Aug.	15, 1914	Chronic interstitial nephritis.
Brown, Almira O.....	80	"	.....	"	.....	Married ..	Canada	Aug.	19, 1914	Cerebral hemorrhage.
Dumas, Adela.....	36	M.	.....	"	.....	Single ..	Ireland	Aug.	20, 1914	Pellagra.
Shean, Margaret.....	62	"	F.	"	.....	"	New Hampshire.	Aug.	21, 1914	Chronic diffuse nephritis.
Griffin, Lulie M.....	33	"	.....	"	.....	Married ..	"	Aug.	22, 1914	General paresis.
Connors, Mary.....	51	"	.....	"	.....	"	New Hampshire.	Aug.	25, 1914	Diffuse nephritis.
Fisk, William H.....	40	M.	.....	"	.....	Single ..	Ireland	Aug.	28, 1914	Cerebral hemorrhage.
Brady, Patrick.....	31	"	.....	"	.....	"	New Hampshire.	Aug.	29, 1914	Paresis.
Cross, Otis E.....	36	"	.....	"	.....	Married ..	"	Aug.	29, 1914	Pellagra.

Persons who died at the Rockingham County Asylum during the year ending August 31, 1914.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of death.	How long at institution.			Cause of death.
	Years.	Male.	Female.	Color.	Single, married or widowed.		Years.	Months.	Days.	
Clifton, Mary	73	.....	F.	W.	Widowed.	Sept. 29, 1913	2	.....	.....	Senile dementia.
White, Amanda	62	.....	"	"	Single	Jan. 24, 1914	27	.....	.....	Lupus of face.
West, Hannah	87	.....	"	"	Widowed.	Oct. 12, 1914	.....	2	.....	Senility.

Persons who died at the Strafford County Asylum during the year ending August 31, 1914.

None.

Persons who died at the Belknap County Asylum during the year ending August 31, 1914.

None.

Persons who died at the Carroll County Asylum during the year ending August 31, 1914.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of death.	How long at institution.			Cause of death.
	Years.	Male.	Female.	Color.	Single, married or widowed.		Years.	Months.	Days.	
Eldredge, Hiram	78	M. ....	.....	W.	Widowed.	Mar. 10, 1914	4	.....	.....	Pneumonia.

Persons who died at the Merrimack County Asylum during the year ending August 31, 1914.

None.

Persons who died at the Hillsborough County Asylum during the year ending August 31, 1914.

None

Persons who died at the Cheshire County Asylum during the year ending August 31, 1914.

None.

Persons who died at the Sullivan County Asylum during the year ending August 31, 1914.

NAME.	AGE, SEX AND CONDITION.				Nationality.	Date of death.	How long at in-stitution.			Cause of death.	
	Years.	Male.	Female.	Color.			Single, married or widowed.	Years.	Months.		Days.
Nash, Hannah	75	.....	F.	W.	Widowed.	American.....	Oct. 26, 1913.	1	8	..	Heart disease.

Persons who died at the Grafton County Asylum during the year ending August 31, 1914.

None.

Persons who died at the Coös County Asylum during the year ending August 31, 1914.

None.

TABLE NO. 7.

*Persons who received State Aid at the New Hampshire State Hospital by Order of the Commissioners of Lunacy during the two years, September 1, 1912, to August 31, 1914, inclusive, not including those whose complete record is given in former reports.**

NAMES.	Where from— County.	State aid at State Hospital began.	Date of discharge.
Abbott, Charles.....	Strafford.....	Nov. 6, 1911	Jan. 11, 1913
Abbott, Dexter.....	Hillsborough....	Oct. 23, 1907	
Adams, Albert E.....	Belknap.....	March 11, 1908	
Adams, Blanche Lucretia...	".....	Nov. 4, 1910	
Adams, Eva.....	Merrimack.....	April 12, 1913	May 17, 1913
Adams, Evelyn.....	".....	Nov. 29, 1913	
Adams, Hazel.....	".....	March 19, 1914	May 28, 1914
Adams, Iva Olive.....	Grafton.....	April 29, 1914	
Addleson, David.....	Coos.....	Dec. 12, 1912	May 27, 1914
Adishian, Salag.....	".....	April 1, 1907	
Ahern, Margaret.....	Hillsborough....	April 8, 1912	Dec. 22, 1912
Akmekeyran, Steven.....	Rockingham.....	Oct. 9, 1911	
Aldrich, Smith E.....	Merrimack.....	Dec. 29, 1912	
Alexander, John.....	Coos.....	Dec. 2, 1911	Feb. 17, 1914
Amidon, Annie.....	Cheshire.....	Aug. 12, 1913	
Anderson, Ida.....	Merrimack.....	Jan. 31, 1910	
Anderson, Louise.....	Hillsborough....	Nov. 2, 1904	
Anderson, Peter.....	Merrimack.....	Jan. 1, 1905	
Andrews, Albert S.....	".....	Nov. 18, 1912	
Andrews, Edward.....	".....	May 30, 1913	June 18, 1913
Andrews, Lilian.....	Belknap.....	Jan. 1, 1908	
Andrews, Nellie.....	Hillsborough....	June 11, 1913	
Andrews, William D.....	Rockingham.....	Sept. 6, 1913	
Andropoulos, Crysoulas....	Strafford.....	Jan. 11, 1913	
Annis, John S.....	Rockingham.....	Aug. 17, 1904	
Archibald, Olive.....	Merrimack.....	Jan. 11, 1911	
Archibald, Stephen.....	Hillsborough....	June 11, 1913	
Arell, Peter.....	Merrimack.....	Jan. 26, 1909	
Arnold, Mary A.....	Belknap.....	Dec. 5, 1910	April 10, 1913
Atwood, Flora A.....	Merrimack.....	April 1, 1907	
Audley, Louise.....	Coos.....	Dec. 26, 1912	May 22, 1913
Aulis, Thomas H.....	Grafton.....	June 15, 1907	
Avery, Everett.....	Strafford.....	June 25, 1913	Jan. 7, 1914
Avery, Laura.....	Merrimack.....	Dec. 19, 1904	
Ayers, Annie.....	Cheshire.....	Aug. 20, 1914	
Bailey, Ervin E.....	Hillsborough....	March 24, 1913	
Baker, Fred W.....	Merrimack.....	May 1, 1913	
Baker, William.....	Hillsborough....	Aug. 27, 1912	Nov. 12, 1913
Balcom, Fred M.....	".....	April 27, 1914	
Banks, Arline E.....	Grafton.....	May 21, 1913	
Barber, Lydia.....	Sullivan.....	Sept. 1, 1911	Nov. 6, 1912
Barbour, Ernest.....	Hillsborough....	Jan. 1, 1905	
Barker, Edward A.....	".....	April 26, 1912	
Barlow, Charles T.....	Rockingham.....	July 30, 1913	
Barnes, Herbert.....	Hillsborough....	Oct. 23, 1907	
Barney, Lizzie.....	".....	Dec. 24, 1913	July 29, 1914
Barr, Arthur L.....	Strafford.....	July 26, 1910	
Barrett, Bridget.....	Hillsborough....	June 11, 1913	
Barrett, Emma.....	".....	June 11, 1913	
Barrett, Harvey C.....	Grafton.....	Oct. 1, 1905	April 10, 1913
Barrett, Sarah.....	Hillsborough....	Nov. 7, 1912	Dec. 3, 1912
Bartlett, Alice S.....	Strafford.....	April 1, 1907	

TABLE NO. 7.—Continued.

NAMES.	Where from— County.	State aid at State Hospital began.	Date of discharge.
Batchelder, Florence.....	Rockingham.....	Feb. 7, 1905	
Batchelder, Inez*.....	Grafton.....	June 24, 1913	Jan. 24, 1914
Bean, Hattie.....	Rockingham.....	Jan. 1, 1905	
Bean, Mark O.....	Carroll.....	Aug. 20, 1908	
Beatty, Roland.....	Belknap.....	Oct. 22, 1908	Sept. 3, 1912
Beaulieu, Edward.....	Hillsborough.....	Aug. 30, 1912	May 15, 1913
Bedel, Alice.....	Coos.....	Nov. 6, 1908	
Beede, Annie.....	Rockingham.....	May 31, 1913	
Beers, Richard.....	Merrimack.....	April 1, 1907	
Beesley, Bessie L.....	Rockingham.....	Sept. 1, 1913	
Beirgeil, Mary.....	Merrimack.....	Sept. 14, 1912	Nov. 29, 1912
Beirne, James P.....	Cheshire.....	Jan. 1, 1905	
Belange, Joseph.....	Sullivan.....	Sept. 12, 1913	
Belanger, Joseph.....	Merrimack.....	May 17, 1914	May 28, 1914
Belrose, Peter.....	Hillsborough.....	April 10, 1913	
Bennett, Aaron.....	Coos.....	Feb. 25, 1912	Dec. 31, 1912
Bennett, Henry.....	Hillsborough.....	Aug. 11, 1912	
Bennett, William.....	Strafford.....	May 24, 1911	
Bennett, William N.....	Merrimack.....	June 2, 1914	
Benoit, Amidas.....	Hillsborough.....	Jan. 1, 1905	
Benoit, Mary.....	Merrimack.....	June 24, 1908	Jan. 11, 1914
Benton, Sarah M.....	Grafton.....	Feb. 14, 1913	Feb. 24, 1913
Bergeron, Joseph.....	Strafford.....	Sept. 19, 1908	
Bernies, J. O.....	Hillsborough.....	June 29, 1912	
Bernoskey, Morris, alias Bell	".....	July 25, 1912	
Berrett, Harvey C.....	Grafton.....	April 1, 1907	
Berry, Grace.....	Merrimack.....	Oct. 5, 1912	Nov. 25, 1912
Berry, John H.....	Strafford.....	April 1, 1903	
Berry, Laura A.....	".....	Jan. 1, 1905	
Berry, Marshall.....	Carroll.....	Sept. 8, 1908	
Berry, Ralph L.....	Strafford.....	April 13, 1908	
Berry, William W.....	Carroll.....	June 24, 1914	Aug. 12, 1914
Berube, Alcide.....	Strafford.....	Sept. 17, 1904	
Besile, Isai.....	Hillsborough.....	March 10, 1909	
Betham, Aurant.....	Merrimack.....	Dec. 4, 1902	
Beyer, Joseph J.....	Rockingham.....	June 14, 1911	
Bickford, Elizabeth.....	Belknap.....	Dec. 10, 1913	Jan. 24, 1914
Billet, Gustave A.....	".....	Jan. 1, 1905	
Bingham, Joseph.....	Cheshire.....	March 1, 1914	
Bisson, Maggie.....	Belknap.....	Nov. 30, 1909	
Bixby, Elizabeth*.....	Hillsborough.....	Dec. 22, 1910	Nov. 28, 1913
Bjorkland, Carl.....	".....	Sept. 16, 1913	June 29, 1914
Blain, Jules.....	".....	April 1, 1907	
Blake, Izetta D.*.....	Merrimack.....	April 1, 1907	
Blake, William B.....	Rockingham.....	Jan. 1, 1907	June 12, 1913
Blanchard, Charles H.....	Merrimack.....	Dec. 1, 1908	
Blanchard, Zoel.....	Hillsborough.....	July 10, 1913	Aug. 23, 1913
Blanchard, William.....	Merrimack.....	June 25, 1913	
Bliss, Lucy.....	Hillsborough.....	May 20, 1910	
Blodgett, George S.....	Merrimack.....	June 11, 1913	
Blood, Charles C.....	Hillsborough.....	Nov. 21, 1905	Jan. 5, 1913
Blood, Edwin P.....	Merrimack.....	April 1, 1907	
Bobille, Mitchell.....	Hillsborough.....	April 14, 1913	May 20, 1913
Bodge, Lois E.*.....	".....	Dec. 14, 1911	May 28, 1914
Boetcher, Bertha.....	".....	June 11, 1913	
Boiley, Ernest.....	".....	March 30, 1909	
Boisvert, Elmer.....	".....	April 15, 1908	
Boisvert, Fred.....	".....	June 15, 1907	
Boisvert, Phoebe.....	".....	March 5, 1912	Sept. 23, 1912
Boler, George M.....	Rockingham.....	June 1, 1913	June 6, 1913
Bolian, Leon.....	".....	Dec. 13, 1913	March 11, 1914
Bonneau, Vittoline.....	Sullivan.....	Dec. 28, 1907	

* Partial support.

TABLE NO. 7.—*Continued.*

NAMES.	Where from— County.	State aid at State Hospital began.	Date of discharge.
Bordeau, Simon.....	Merrimack.....	Jan. 1, 1905	
Borden, Frank.....	Hillsborough....	Oct. 23, 1907	
Borden, Martin E.....	".....	March 11, 1914	April 26, 1914
Bornstein, Emma.....	Coos.....	Sept. 20, 1912	
Boudreau, Frank.....	Merrimack.....	Nov. 12, 1912	June 19, 1914
Boudreau, Rose.....	Hillsborough....	July 28, 1914	
Bouillette, Ernest.....	Merrimack.....	June 10, 1913	
Boulanger, Mary.....	Hillsborough....	June 11, 1913	
Bourdeau, Maggie.....	Cheshire.....	Aug. 12, 1913	
Bournival, George.....	Hillsborough....	Aug. 26, 1910	
Bowen, Allyn G.....	".....	June 18, 1912	
Bowles, John H.....	Grafton.....	Nov. 3, 1910	
Boyle, James A.....	Hillsborough....	Feb. 9, 1909	
Boyle, R. Edward.....	Belknap.....	April 2, 1914	
Brackett, Ida Corkum.....	Coos.....	June 14, 1912	Nov. 24, 1912
Bradley, Burnside.....	Belknap.....	Sept. 27, 1913	
Brady, Patrick.....	Hillsborough....	May 6, 1913	Aug. 28, 1914
Breaton, Ezilda.....	Strafford.....	Oct. 14, 1912	Jan. 16, 1914
Brent, Charles.....	Grafton.....	July 28, 1910	
Brickett, George.....	Rockingham....	July 1, 1907	
Brock, Sarah.....	Merrimack.....	Sept. 6, 1913	
Brooks, Jerome.....	Sullivan.....	Dec. 28, 1907	
Brooks, Martin.....	Rockingham....	Nov. 28, 1910	
Brow, Corliss.....	Grafton.....	April 5, 1913	
Brown, Alfred H.....	Rockingham....	April 1, 1907	June 1, 1914
Brown, Alfred K.....	".....	Jan. 1, 1905	
Brown, Almira C.....	Belknap.....	May 16, 1912	Aug. 15, 1914
Brown, Annie.....	Cheshire.....	Jan. 1, 1907	
Brown, Bonavista.....	Rockingham....	May 24, 1910	March 29, 1914
Brown, Catherine.....	".....	May 8, 1913	
Brown, Claudia.....	Hillsborough....	Feb. 1, 1911	
Brown, George W.....	Cheshire.....	July 1, 1907	
Brown, Harry.....	Rockingham....	Oct. 22, 1908	May 8, 1913
Brown, James H.....	Strafford.....	June 8, 1911	
Brown, Lillian D.....	Hillsborough....	March 1, 1912	Aug. 25, 1913
Brown, Mary B.....	Rockingham....	March 2, 1912	July 2, 1913
Brown, Mertie.....	Merrimack.....	Nov. 23, 1911	
Brown, Susan J.....	Rockingham....	May 18, 1909	March 1, 1913
Brown, Thomas.....	Cheshire.....	June 13, 1914	
Brulott, Milly.....	Grafton.....	May 29, 1913	Nov. 7, 1913
Bryer, Ellen.....	Sullivan.....	Sept. 5, 1913	
Buckley, Andrew.....	Rockingham....	Nov. 16, 1912	
Buckley, Thomas.....	Hillsborough....	July 10, 1913	Oct. 23, 1913
Buckminster, William H.....	Cheshire.....	Aug. 9, 1913	
Burbank, Henry.....	Carroll.....	Oct. 4, 1910	
Burgoin, Concorde.....	Hillsborough....	April 1, 1907	
Burke, Catherine.....	".....	Oct. 18, 1912	Aug. 9, 1913
Burneche, Lucie.....	".....	Aug. 25, 1913	Jan. 11, 1914
Burneche, Lucie.....	".....	Feb. 4, 1914	May 14, 1914
Burr, Emma J.....	Sullivan.....	Jan. 1, 1905	
Burroughs, John M.....	Strafford.....	Feb. 14, 1906	
Butterfield, Leonard D.....	Carroll.....	Oct. 10, 1912	March 1, 1913
Byers, Jennie.....	Rockingham....	May 31, 1913	
Byrns, Ambrose G.....	Cheshire.....	Aug. 31, 1910	
Cady, Edward L.....	Merrimack.....	Dec. 19, 1901	
Callahan, Mary.....	Hillsborough....	June 11, 1913	
Cameron, James W.....	Rockingham....	July 1, 1908	
Cannon, John.....	".....	June 3, 1914	July 1, 1914
Card, John P.....	Strafford.....	April 1, 1907	June 8, 1913
Carder, Walter S.....	Cheshire.....	Aug. 15, 1913	
Carney, Fannie.....	Rockingham....	May 31, 1913	
Carlson, August.....	Merrimack.....	Oct. 19, 1908	

TABLE NO. 7.—*Continued.*

NAMES.	Where from— County.	State aid at State Hospital began.	Date of discharge.
Carpenter, Emma G. ....	.....	Nov. 1, 1913	Nov. 20, 1913
Carr, Harriet A.	Rockingham.	Sept. 29, 1909	
Carr, Olive. ....	.....	Jan. 7, 1914	April 28, 1914
Carr, Stillman.	Merrimack.	Feb. 2, 1914	April 15, 1914
Carr, Stillman G. ....	.....	April 22, 1914	Aug. 19, 1914
Carrier, Josephine.	Hillsborough.	April 1, 1910	
Carriveau, George.	Merrimack.	Oct. 1, 1907	
Carron, Francois.	Hillsborough.	Oct. 24, 1912	May 27, 1914
Carson, Grace.	Merrimack.	May 12, 1908	
Carter, George. ....	.....	Jan. 1, 1905	
Carter, James.	Grafton.	Oct. 9, 1912	Dec. 4, 1913
Carter, Sarah.	Hillsborough.	Sept. 12, 1913	
Casey, James H.*.	Strafford.	March 1, 1912	
Casey, Mary.	Coos.	April 9, 1909	
Cassidy, Frank E.	Strafford.	Oct. 10, 1911	
Castagne, Frank.	Merrimack.	Jan. 1, 1905	
Caswell, Frank. ....	.....	June 27, 1912	
Caswell, George B.	Grafton.	May 26, 1913	Dec. 20, 1913
Cate, Christie McR.	Hillsborough.	Jan. 15, 1907	
Cate, Mae Edyth.	Strafford.	April 23, 1914	
Chaloner, Hazel W.	Hillsborough.	July 19, 1911	
Chamard, Desire. ....	.....	May 15, 1914	
Chamberlain, Martha.	Merrimack.	Jan. 11, 1911	
Chambers, John P. ....	.....	Nov. 1, 1912	Dec. 9, 1912
Champagne, Philomene.	Hillsborough.	Nov. 12, 1913	
Champney, Rose.	Cheshire.	Aug. 12, 1913	Aug. 13, 1914
Chandler, Bertha R.	Merrimack.	Nov. 12, 1912	Feb. 19, 1914
Chapman, William E.†.	Rockingham.	Aug. 20, 1910	Jan. 23, 1912
Chandler, Isaac S.	Merrimack.	June 29, 1911	
Chapman, Mary.	Grafton.	Feb. 5, 1908	
Chapman, William E.	Rockingham.	Nov. 18, 1913	
Charait, David.	Hillsborough.	June 10, 1910	
Chase, Eugene M*. ....	.....	June 21, 1910	
Chase, Nellie.	Grafton.	Feb. 6, 1908	
Chase, Odell R.	Carroll.	May 30, 1905	
Chasse, Ensebe.	Hillsborough.	Jan. 23, 1913	Jan. 7, 1914
Chasse, Narcisse. ....	.....	May 26, 1911	
Chasse, Vital. ....	.....	Aug. 4, 1914	
Cheney, Charles.	Grafton.	Jan. 1, 1905	
Cheney, Eugene J.	Merrimack.	April 18, 1913	May 8, 1913
Chisholm, Nellie Ethel.	Strafford.	April 28, 1913	May 15, 1914
Choschy, Herman J.	Sullivan.	April 1, 1907	
Christian, John.	Hillsborough.	June 13, 1911	Dec. 21, 1912
Choninard, Xavier.	Cheshire.	May 29, 1913	Oct. 11, 1913
Clair, Samuel J.	Hillsborough.	Feb. 26, 1913	
Clancy, John H.	Coos.	Sept. 15, 1908	
Clark, Edith.	Merrimack.	Jan. 1, 1905	
Clark, James. ....	.....	Jan. 1, 1905	May 18, 1913
Clark, Jennie Atherton.	Grafton.	Aug. 18, 1909	
Clarke, Julian O.	Hillsborough.	Oct. 23, 1907	
Clautur, Odile. ....	.....	Sept. 1, 1911	
Clayton, Betsey.	Strafford.	Jan. 23, 1908	
Clegg, William N.	Cheshire.	Jan. 1, 1905	
Clifford, Everett L.	Merrimack.	Dec. 10, 1912	
Clough, Albion.	Carroll.	July 29, 1913	
Clough, Herbert S. ....	.....	Sept. 8, 1912	
Cloutier, Lucie.	Rockingham.	March 3, 1914	April 11, 1914
Cobb, Fay Hill.	Grafton.	Aug. 16, 1909	
Cofran, Samuel B.*.	Merrimack.	Sept. 1, 1910	
Coggins, Mary.	Hillsborough.	June 10, 1914	
Cohen, Golden.	Merrimack.	Dec. 20, 1911	
Colby, Annie.	Grafton.	Feb. 6, 1908	

* Partial support.

† Not insane.

TABLE NO. 7.—*Continued.*

NAMES.	Where from— County.	State aid at State Hospital began.	Date of discharge.
Coldwell, Lizzie M.....	Hillsborough	Sept. 1, 1913	
Cole, Selina	"	Dec. 18, 1911	
Coleman, Frank	Strafford.....	Jan. 1, 1912	March 29, 1913
Coleman, William ..	Merrimack	April 1, 1907	
Collins, Carrie	Hillsborough	April 29, 1913	July 12, 1913
Collins, John H.....	"	July 1, 1914	
Collins, Margaret M.....	"	Nov. 1, 1907	
Colwell, Hattie L.....	Belknap	Feb. 25, 1909	
Columbe, Delphis	Merrimack	Jan. 15, 1913	Feb. 4, 1913
Conlin, Mary*.....	Sullivan	Sept. 1, 1912	
Conlon, Annie M.....	Hillsborough	June 19, 1909	
Connolly, Thomas	Merrimack	Jan. 17, 1910	
Connors, Thomas	Cheshire	Nov. 4, 1913	
Connord, Daniel	Hillsborough	June 11, 1913	
Connors, Mary	"	Aug. 12, 1912	Jan. 12, 1913
Connors, Mary	Cheshire	Aug. 12, 1913	Aug. 22, 1914
Conovan, James.....	Merrimack	Dec. 17, 1906	
Constant, Gideon	"	July 24, 1912	
Conway, Joseph.....	Hillsborough	June 11, 1913	
Conway, Mary A.....	"	Dec. 30, 1913	March 14, 1914
Conway, Mary A.....	"	July 7, 1914	
Cook, Carrie	"	Aug. 15, 1910	
Copp, Mina	Grafton	Feb. 6, 1908	
Corbett, Frank.....	Merrimack	Feb. 5, 1914	April 11, 1914
Corbett, Margaret.....	Cheshire	June 4, 1907	
Corey, Sarah.....	Sullivan	Dec. 28, 1911	
Corson, Eva M.....	Rockingham	July 26, 1912	Aug. 19, 1914
Cote, Adeline	Hillsborough	March 6, 1914	
Cote, Celena	Strafford.....	Nov. 12, 1913	Nov. 23, 1913
Cotter, William J.....	Sullivan	Jan. 31, 1914	
Cotton, Willard B.....	Rockingham.....	Jan. 13, 1912	May 1, 1913
County, Mary J.....	Hillsborough	Aug. 25, 1909	
Cournier, Flora.....	Strafford.....	June 29, 1913	
Courmoyer, Arthur.....	Coos	Feb. 11, 1914	May 7, 1914
Craig, Lenora S.....	Hillsborough	May 8, 1913	
Crocker, Bertis A.....	Cheshire	Jan. 1, 1905	
Crompton, William	Rockingham.....	April 1, 1907	
Cromwell, Catherine.....	Merrimack	Sept. 1, 1911	
Cromin, Delia F.....	Hillsborough	June 11, 1913	
Crosby, Benjamin.....	Cheshire	July 1, 1907	Sept. 28, 1912
Croteau, Ernest	Hillsborough	June 20, 1910	
Crowley, John.....	Belknap	April 1, 1907	April 30, 1914
Cuddihy, James W.....	Hillsborough	Oct. 23, 1907	
Cuddihy, Lawrence.....	"	Feb. 24, 1913	
Cuff, Mary Agnes.....	Rockingham.....	June 8, 1907	
Cullen, Delia.....	Hillsborough	July 11, 1913	
Cummings, Harriet E.	"	Aug. 2, 1906	
Cunningham, John	Rockingham.....	Nov. 8, 1907	
Currier, Fred.....	"	Aug. 26, 1913	
Currier, Josephine.....	Belknap	May 22, 1909	
Curtis, Henry	Coos	Dec. 1, 1911	
Cutter, Mary.....	Grafton	Jan. 1, 1905	March 24, 1913
Cutting, Ina.....	"	June 1, 1911	
Dabo, Lizzie C.....	Cheshire	Oct. 3, 1912	April 3, 1913
Dailey, Joseph	Hillsborough	Aug. 11, 1914	
Danforth, Fairfield	Coos	Jan. 27, 1914	
Daniels, Antonie.....	Hillsborough	April 29, 1911	
Daniels, George L.....	"	Oct. 23, 1907	June 24, 1914
Danserault, Frank	Strafford.....	Jan. 1, 1905	
Davis, Alecia M.....	Grafton	Jan. 1, 1905	
Davis, Charles	Strafford.....	Nov. 29, 1909	

* Partial support.

TABLE NO. 7.—*Continued.*

NAMES,	Where from— County.	State aid at State Hospital began.		Date of discharge.	
Davis, Harriet	Grafton	Jan.	14, 1913	Feb.	16, 1913
Davis, Lizzie	Rockingham	Nov.	5, 1908	Sept.	18, 1912
Davis, Mary	"	May	31, 1913		
Daymouth, Mary	Hillsborough	April	1, 1907		
Dearborn, Elizabeth A.	Rockingham	Jan.	1, 1905		
Dejardin, Virginia	"	March	19, 1912	Nov.	8, 1912
Dellaire, Oran	Hillsborough	March	23, 1912		
Delorey, Margaret L.	"	Jan.	14, 1913	April	11, 1914
Delorier, Dorothy	"	Nov.	15, 1912		
Dempsey, Frances	Strafford	May	9, 1907		
Deschaine, Archille	Hillsborough	Nov.	14, 1913	May	15, 1914
Desmaris, Mary	Merrimack	July	18, 1907		
Desmaris, Rosanna	Hillsborough	March	1, 1913	June	7, 1913
Desmond, Patrick	"	May	12, 1913	Sept.	29, 1913
Desvosier, Alphonse	"	Sept.	3, 1913	Oct.	3, 1913
Dexter, Hattie S.	Belknap	Feb.	14, 1905		
Dion, Joseph	Hillsborough	Jan.	4, 1908		
Dion, Philaness	Grafton	April	27, 1914	July	23, 1914
Dione, Louis	Hillsborough	Jan.	1, 1905		
Dionne, Ivanho	Strafford	Jan.	25, 1899		
Dionne, Josephine	"	April	1, 1907		
Dixon, Emma J.	"	March	5, 1910		
Dockham, Earl G.	Belknap	Jan.	20, 1912		
Dodge, Lizzie T.	"	April	1, 1907	May	22, 1913
Donnar, John	Merrimack	Jan.	31, 1908		
Donnelly, Edward	Sullivan	Aug.	17, 1909		
Donnolly, Alice	Strafford	Aug.	30, 1910		
Dorgan, Michael	Hillsborough	Oct.	25, 1913		
Doucet, Edward	"	Nov.	8, 1912		
Douquette, Leon	Strafford	Sept.	5, 1912		
Dow, Annie	Rockingham	Aug.	11, 1914		
Dow, John G.	Merrimack	Dec.	30, 1913	Jan.	19, 1914
Dowaliby, Michael A.	Strafford	May	14, 1908		
Dowlin, Nellie	Merrimack	March	1, 1913		
Dowst, Clarence L.	Grafton	Sept.	1, 1911		
Doyle, Sylvester	Cheshire	Jan.	1, 1905		
Doyle, Patrick J.	Hillsborough	Dec.	8, 1913		
Drew, George H.	Merrimack	Aug.	6, 1912	March	7, 1914
Drew, Mary A.	Belknap	Sept.	7, 1913		
Driscoll, Jeremiah	Grafton	May	21, 1910	Sept.	11, 1912
Driscoll, Mary J.	Merrimack	Sept.	24, 1910		
Druker, Hannah D.	Hillsborough	June	11, 1913		
Dube, Eugenie	Cheshire	June	4, 1907		
Ducey, John	Hillsborough	April	29, 1914		
Duffy, Mary	Strafford	Jan.	1, 1913		
Duffy, John	Rockingham	March	7, 1912		
Duffy, Mabel	Hillsborough	Aug.	20, 1912	Jan.	17, 1913
Dufour, Ernestine	"	Nov.	8, 1913	Dec.	24, 1913
Dumas, Adelard	"	May	20, 1914	Aug.	19, 1914
Dunham, Etta M.	Rockingham	Oct.	23, 1908		
Dunham, Ruth C.	Cheshire	June	9, 1913	Dec.	22, 1913
Dunn, Mary	"	Sept.	5, 1911		
Dupleesee, Obeline	"	Jan.	1, 1905		
Dupont, Alexander	Hillsborough	Oct.	31, 1912	June	15, 1913
Durkin, Mary	Merrimack	Aug.	15, 1910		
Dwyer, Patrick	Rockingham	March	1, 1910		
Dysart, Willie	Grafton	Jan.	1, 1905		
Eastman, Luella E.	Rockingham	Sept.	14, 1908		
Eaton, George M.	"	June	30, 1910		
Eaton, Richard	Hillsborough	Oct.	23, 1907		
Edge, Catherine	Strafford	Jan.	20, 1914		

TABLE NO. 7.—*Continued.*

NAMES.	Where from— County.	State aid at State Hospital began.	Date of discharge.
Edgerly, Anna M.*.....	Merrimack.....	Oct. 17, 1909	
Edgerly, Frederick H.....	Carroll.....	Jan. 1, 1905	
Edmunds, Ida.....	Merrimack.....	Aug. 8, 1910	
Egan, Annie.....	Sullivan.....	Feb. 6, 1912	
Egan, Thomas F.....	Merrimack.....	June 29, 1911	
Ekblad, John.....	Rockingham.....	Jan. 1, 1908	
Elegian, John.....	Hillsborough.....	Oct. 20, 1911	Oct. 29, 1913
Ellard, Kathleen.....	Merrimack.....	Sept. 15, 1913	Sept. 18, 1913
Elliott, Moses A.....	".....	Nov. 6, 1912	
Ellis, Hollis M.....	Belknap.....	April 1, 1907	
Ellison, Augustus.....	Rockingham.....	May 31, 1913	
Elsner, Louis.....	".....	Jan. 1, 1905	
Elsner, Roy.....	".....	June 19, 1911	
Emery, Frank D.....	Hillsborough.....	Jan. 14, 1913	Feb. 4, 1913
Emery, Zoel.....	Cheshire.....	Jan. 20, 1903	
Enner, Samuel.....	Belknap.....	April 16, 1913	May 2, 1913
Erierson, Anna.....	Hillsborough.....	Oct. 29, 1912	
Erickson, Hannah.....	Merrimack.....	Sept. 20, 1905	
Ethier, Charles.....	Cheshire.....	Aug. 14, 1908	
Evans, Hattie L.....	Grafton.....	Jan. 1, 1905	
Evans, Lavonia.....	".....	Oct. 14, 1912	
Everett, Annie.....	Cheshire.....	Jan. 1, 1905	
Fagan, Eliza.....	Merrimack.....	April 1, 1907	
Fairfield, David G.....	Cheshire.....	Feb. 25, 1909	
Fales, Edward.....	Sullivan.....	May 16, 1914	May 27, 1914
Fall, Jane L.....	Strafford.....	April 24, 1911	
Farmonian, Annie.....	Merrimack.....	Sept. 16, 1907	
Farrar, Fiske.....	Cheshire.....	March 1, 1913	
Farrell, Patrick.....	".....	Jan. 1, 1913	Jan. 13, 1913
Faucher, Ulric.....	Hillsborough.....	Nov. 4, 1912	
Fecteau, John.....	Strafford.....	April 1, 1907	
Ferkand, Angelina.....	Coos.....	May 13, 1907	
Fernald, Bracket L.....	Carroll.....	July 6, 1911	
Fernald, Helen.....	Strafford.....	Nov. 19, 1910	
Fernald, Vietta A.....	Carroll.....	Dec. 1, 1913	
Ferrina, Dioga.....	Hillsborough.....	June 26, 1913	Dec. 15, 1913
Ferris, Olive.....	".....	Dec. 1, 1912	
Fifield, Harriet.....	Belknap.....	Oct. 29, 1913	Dec. 31, 1913
Filion, Peter.....	Grafton.....	Jan. 1, 1905	
Filppula, John.....	Merrimack.....	Aug. 7, 1913	June 20, 1914
Finley, Abbie.....	Hillsborough.....	June 3, 1914	Aug. 15, 1914
Fisher, George.....	Merrimack.....	April 1, 1907	Aug. 22, 1913
Fisk, William H.....	Hillsborough.....	Jan. 1, 1907	
Fiske, Abbie.....	Merrimack.....	May 16, 1911	
Fitz, John L.....	".....	Oct. 1, 1904	
Fitzgerald, Catherine.....	".....	April 1, 1907	June 12, 1914
Flaherty, Fred J.....	Hillsborough.....	April 7, 1914	
Flanagan, Thomas.....	".....	July 15, 1914	
Flanders, Edith M.....	Merrimack.....	Sept. 24, 1913	
Flanders, Reuben R.....	Carroll.....	Sept. 15, 1909	
Flanders, Rose.....	Belknap.....	July 29, 1908	
Flessa, George.....	Hillsborough.....	Oct. 23, 1907	
Fletcher, Frank.....	Coos.....	June 22, 1914	
Fleury, Rosanna.....	Merrimack.....	Sept. 5, 1912	Dec. 7, 1912
Fleury, Rozanna.....	".....	Oct. 3, 1913	
Flisk, Peter.....	Hillsborough.....	July 26, 1909	
Foley, John, alias Medrick Du-	Belknap.....	July 10, 1914	
Foley, Mary.....	Hillsborough.....	Jan. 1, 1906	
Foote, Bridget.....	Belknap.....	July 17, 1913	Dec. 14, 1913
Foote, Margaret.....	Sullivan.....	Jan. 3, 1913	June 25, 1913
Forbes, Jessie.....	Coos.....	April 1, 1907	

* Partial support.

TABLE NO. 7.—*Continued.*

NAMES.	Where from— County.	State aid at State Hospital began.	Date of discharge.
Ford, Charles.....	Rockingham.....	Nov. 8, 1907	
Fortier, Albert.....	Coos.....	Dec. 13, 1913	Feb. 5, 1914
Fortier, Albert.....	".....	June 6, 1914	
Foster, Belle Buttrick.....	Rockingham.....	Sept. 15, 1907	
Fountain, Eddie.....	Strafford.....	April 1, 1907	
Fountain, Nelson.....	Rockingham.....	Oct. 23, 1913	
Francoeur, Mary.....	Hillsborough.....	Aug. 31, 1914	
Frane, Henry.....	".....	Jan. 15, 1907	
Francois, Carron.....	".....	Oct. 24, 1912	
Fredette, Joseph.....	".....	April 1, 1907	
Freeto, Luella L.....	Grafton.....	April 1, 1904	
Frost, Sarah.....	Rockingham.....	May 31, 1913	
Fulsom, Fred P.....	".....	Feb. 24, 1914	
Fulton, Robert.....	Carroll.....	July 1, 1911	
Furbush, Mary A.....	Strafford.....	Jan. 1, 1905	
Gadbois, Leo.....	Hillsborough.....	Aug. 1, 1911	Sept. 18, 1912
Gagnon, Horace.....	Cheshire.....	Feb. 1, 1913	
Galley, Nellie.....	Strafford.....	July 27, 1911	
Galway, Joseph X.....	Hillsborough.....	April 2, 1911	
Gamberewski, Philip.....	Grafton.....	Oct. 4, 1911	
Gariepy, Adelard.....	Hillsborough.....	May 23, 1914	
Garland, Dexter.....	Belknap.....	Feb. 7, 1912	Feb. 4, 1914
Garland, William.....	Rockingham.....	Jan. 1, 1905	
Garrett, Tony.....	Strafford.....	Feb. 17, 1909	
Garvey, Jennie T.....	Merrimack.....	July 1, 1906	
Gauthier, Albert.....	".....	May 22, 1913	
Gauthier, Mary.....	Hillsborough.....	April 15, 1908	
Gauoreau, Angelina.....	Merrimack.....	April 26, 1912	
Gayne, Michael.....	Rockingham.....	Dec. 9, 1904	
Gedraitis, Paul.....	Grafton.....	Dec. 21, 1907	
Gendron, Julia.....	Hillsborough.....	June 11, 1913	Aug. 29, 1913
Genest, Charles.....	Coos.....	Oct. 29, 1907	
Gervais, Ludger.....	Hillsborough.....	Feb. 6, 1909	July 6, 1913
Gibney, Frank.....	Merrimack.....	Nov. 9, 1913	
Gibson, Elwin J.....	Hillsborough.....	March 30, 1912	April 8, 1913
Gignac, Rosanna.....	Belknap.....	April 1, 1907	
Gillan, Bertha K.....	Hillsborough.....	June 21, 1911	Aug. 3, 1913
Gilman, Clarence.....	Grafton.....	Sept. 1, 1913	
Gilman, Nellie.....	".....	Aug. 15, 1914	
Gilmartin, Patrick J.....	Hillsborough.....	March 10, 1914	May 16, 1914
Ginahis, Peter.....	".....	May 25, 1912	May 9, 1913
Glasco, Lavina.....	Grafton.....	May 6, 1905	Oct. 31, 1912
Gleason, Frank.....	Hillsborough.....	Sept. 13, 1906	
Glidden, Walter C.....	Strafford.....	April 1, 1907	
Glines, Henrietta.....	Merrimack.....	March 24, 1908	
Glover, Lina M.....	Rockingham.....	July 28, 1908	
Goldthwaite, Ephreim J.....	Strafford.....	April 1, 1914	April 25, 1914
Good, James.....	Cheshire.....	Nov. 10, 1903	Jan. 27, 1914
Goodreau, Maria J.....	Hillsborough.....	March 27, 1912	
Goodwin, Celina.....	".....	Jan. 8, 1913	Jan. 24, 1913
Goodwin, Etta L.....	Merrimack.....	July 11, 1903	
Goodwin, Walter E.....	Hillsborough.....	Feb. 7, 1913	
Goodwin, William.....	".....	Oct. 16, 1911	
Gorrell, Albert.....	Merrimack.....	Dec. 19, 1913	July 12, 1914
Gosley, Mary.....	Belknap.....	April 21, 1914	June 27, 1914
Gould, Cynthia.....	Cheshire.....	July 25, 1913	
Gould, James P.....	Hillsborough.....	Sept. 21, 1912	
Gould, Mamie M.....	Sullivan.....	March 20, 1914	
Grace, Richard.....	Rockingham.....	Feb. 18, 1914	
Grant, Anna M.....	Merrimack.....	July 11, 1901	
Grant, Betsey E.....	Carroll.....	Jan. 1, 1905	

TABLE NO. 7.—*Continued.*

NAMES.	Where from— County.	State aid at State Hospital began.	Date of discharge.
Gray, Alice C.....	Merrimack.....	May 28, 1912	
Gray, Hattie L.....	Strafford.....	Dec. 17, 1913	
Gray, Eliza A.....	Rockingham.....	Sept. 30, 1913	March 31, 1914
Gray, Eliza A.....	".....	June 20, 1914	
Greaney, Maud.....	Hillsborough.....	June 6, 1909	
Greeley, George L.....	Merrimack.....	July 1, 1907	
Grenier, Marie R. D.....	Hillsborough.....	Sept. 1, 1911	Dec. 20, 1913
Griffin, Charles H.....	Coos.....	March 5, 1910	Oct. 15, 1912
Griffin, Ida.....	Rockingham.....	May 31, 1913	
Griffin, Margaret D.....	Hillsborough.....	March 20, 1914	
Griffin, Philip.....	Merrimack.....	Nov. 16, 1912	
Griffin, Thomas.....	Hillsborough.....	Sept. 23, 1909	
Guay, Joseph O.....	Coos.....	March 17, 1914	
Guilbeault, Lizzie.....	Hillsborough.....	Feb. 14, 1908	
Guild, Elwin E.....	Sullivan.....	March 11, 1913	July 11, 1913
Gurley, Lucy.....	Hillsborough.....	Jan. 24, 1913	
Haas, Olga.....	".....	Aug. 17, 1914	
Hale, Charles L.....	Sullivan.....	April 1, 1907	Sept. 14, 1914
Hale, Grace O.....	Cheshire.....	June 4, 1907	
Hale, Harry L.....	".....	June 4, 1907	
Haley, Elvira.....	Rockingham.....	July 31, 1912	Aug. 27, 1914
Hall, Alice M.....	".....	March 1, 1913	
Hall, John.....	Hillsborough.....	June 11, 1913	
Hall, Oscar.....	Merrimack.....	Jan. 1, 1905	
Halpin, Kate.....	".....	Jan. 9, 1913	Sept. 9, 1913
Hamel, Minnie.....	Hillsborough.....	Jan. 15, 1914	
Hammel, Alfred.....	Merrimack.....	Dec. 5, 1908	
Hammel, Alfred, Jr.....	".....	June 21, 1911	
Hannigan, Thomas.....	".....	Aug. 25, 1913	Aug. 26, 1913
Hardy, Mattie E.....	Hillsborough.....	April 1, 1907	
Hardy, Walter D.....	Merrimack.....	March 1, 1909	
Harlan, Mary.....	Hillsborough.....	Jan. 1, 1905	
Harrigan, Ethel.....	Grafton.....	Jan. 1, 1910	
Harrington, Albert.....	Hillsborough.....	Sept. 26, 1913	
Hart, Ella.....	".....	April 15, 1908	
Hart, Frank.....	".....	Dec. 22, 1910	
Hartigan, Margaret.....	".....	March 4, 1910	
Hartshorn, Harry A.....	".....	Aug. 3, 1914	Aug. 25, 1914
Harty, David.....	Cheshire.....	Oct. 28, 1913	May 1, 1914
Hassalgram, John.....	".....	Feb. 11, 1913	May 13, 1913
Hasu, Mary.....	Hillsborough.....	April 1, 1914	April 8, 1914
Hatch, Ella.....	Cheshire.....	April 3, 1914	July 25, 1914
Hawes, Alice.....	Merrimack.....	Nov. 22, 1910	Sept. 12, 1912
Hayes, Herbert C.....	Strafford.....	June 1, 1909	
Hayes, Martha D.....	".....	Sept. 22, 1904	Jan. 20, 1913
Hayward, Annie.....	Merrimack.....	Jan. 1, 1905	
Hazelton, Belle.....	Rockingham.....	May 31, 1913	Sept. 18, 1913
Hazen, Charles.....	Hillsborough.....	Dec. 1, 1910	
Healey, Josephine.....	".....	Sept. 24, 1913	
Healey, Patrick A.....	".....	April 22, 1906	
Heath, Mary J.....	".....	Sept. 9, 1909	Oct. 14, 1912
Hebert, Napoleon.....	".....	Sept. 22, 1913	Oct. 8, 1913
Hill, Annie E.....	".....	Jan. 1, 1905	
Hill, Arthur.....	Grafton.....	Aug. 5, 1911	
Hill, Lena N.....	Rockingham.....	March 10, 1913	
Hill, Matilda.....	Cheshire.....	July 23, 1905	
Hillstrom, Olga.....	Strafford.....	April 1, 1907	
Hinds, Edward F.....	Belknap.....	July 31, 1913	Aug. 9, 1913
Hobbs, Frances M.*.....	Hillsborough.....	Nov. 19, 1912	
Hodsdon, Everett F.....	Strafford.....	April 1, 1907	
Hohenberger, Adam.....	Hillsborough.....	Oct. 23, 1907	

* Partial support.

TABLE NO. 7.—Continued.

NAMES.	Where from— County.	State aid at State Hospital began.	Date of discharge.
Hoitt, Joseph O.....	Strafford	June 2, 1914	
Holbrook, Serepta	Cheshire	Aug. 12, 1913	
Hollingshead, Emma	Rockingham	March 9, 1914	
Holt, Clara.....	Hillsborough	June 11, 1913	
Holt, Fred	"	Oct. 23, 1907	
Hood, Susie P	"	Nov. 27, 1908	
Hopkins, Ella.....	Cheshire	Oct. 30, 1913	
Horan, Ellen.....	Hillsborough	April 1, 1907	Sept. 28, 1913
Horne, Augustus.....	Strafford.....	July 29, 1913	Aug. 11, 1913
Horne, Hannah.....	Carroll.....	May 16, 1913	
Howard, Alma M.....	Cheshire.....	May 13, 1912	
Howard, Anna.....	Grafton.....	April 1, 1907	Jan. 27, 1913
Howard, Jennie.....	Hillsborough	July 16, 1909	
Howe, John C.....	Sullivan.....	Jan. 1, 1905	May 17, 1913
Howell, Phillip.....	Hillsborough	Oct. 2, 1912	Dec. 9, 1912
Hoy, Margaret.....	Coos.....	Sept. 26, 1913	
Hoyt, Charles	Merrimack	Feb. 25, 1903	
Hoyt, Nora.....	Carroll.....	Feb. 26, 1909	
Hoyt, William.....	Strafford.....	Feb. 10, 1905	
Hubbley, William.....	Merrimack.....	July 24, 1914	Aug. 19, 1914
Huble, Frank E.....	Rockingham.....	Feb. 29, 1912	
Huble, Thomas.....	"	Jan. 1, 1905	
Hubsche, John L.....	Hillsborough	Oct. 26, 1912	April 2, 1913
Hull, Elmer A.....	"	March 10, 1909	
Hurley, Albert.....	"	July 11, 1913	Sept. 22, 1913
Hustus, James H.....	Merrimack	Oct. 1, 1913	Aug. 6, 1914
Ingalls, Bertha E.....	Hillsborough	April 1, 1907	
Inglis, Grace M.....	Rockingham.....	April 1, 1907	
Ingraham, Florence M.....	Cheshire.....	June 8, 1912	
Iorne, Joseph B.....	Strafford.....	Jan. 1, 1912	Sept. 17, 1913
Iszyk, Wicynty.....	Hillsborough	June 3, 1913	June 15, 1913
Iszyk, Wicynty.....	"	Sept. 24, 1913	Dec. 10, 1913
Ives, Lizzie.....	"	March 27, 1912	
Jackson, Henry.....	Coos.....	April 1, 1907	
Jackson, Mary H.....	Hillsborough	Dec. 13, 1913	
Jacobs, Agnes*.....	Merrimack	July 4, 1914	
Janelle, Alphonse.....	Rockingham.....	April 1, 1907	
Janelle, Eleanor.....	Hillsborough	Jan. 1, 1905	Sept. 20, 1912
Jeneau, Maltiba.....	Belknap	June 13, 1914	
Jenness, Arthur M.....	Strafford.....	Oct. 18, 1910	April 27, 1914
Jette, Desire.....	Hillsborough	Oct. 24, 1911	
Jewell, Emma.....	Belknap	April 9, 1914	
Johnson, Alice.....	Hillsborough	May 10, 1914	
Johnson, Arthur.....	Rockingham.....	Aug. 26, 1913	June 11, 1914
Johnson, Ella F.....	Hillsborough	July 1, 1908	
Johnson, Etta.....	"	Nov. 18, 1913	June 26, 1914
Johnson, Everett.....	Strafford.....	June 27, 1905	
Johnson, Frank.....	Grafton.....	April 21, 1914	July 20, 1914
Johnson, James.....	Rockingham.....	March 3, 1905	
Johnson, Louisa F.....	Merrimack	Oct. 1, 1903	
Jones, Anna R.....	Hillsborough	Jan. 15, 1907	
Jones, Clara E.....	Strafford.....	Dec. 8, 1910	June 26, 1914
Jones, George T.....	Hillsborough	Nov. 4, 1913	
Jones, Thomas F.....	Rockingham.....	Oct. 24, 1908	
Jones, William H.....	"	June 19, 1911	
Jones, Willoughby D.....	Coos.....	June 29, 1913	June 11, 1914
Joslaski, Felix.....	Hillsborough	April 15, 1912	
Judkins, Caleb W.....	Merrimack	Sept. 25, 1912	Oct. 6, 1912
Kallman, George.....	Grafton.....	Sept. 1, 1906	
Kandarian, Nazanee.....	Hillsborough	April 11, 1911	
Kaps, Pauline.....	"	Dec. 9, 1913	

* Partial support.

TABLE NO. 7.—*Continued.*

NAMES.	Where from— County.	State aid at State Hospital began.		Date of discharge.
Kavish, Celia.....	Hillsborough	May	21, 1914	
Kay, Leon*.....	Grafton	Oct.	4, 1912	Dec. 23, 1912
Kearns, Jane.....	Hillsborough	Feb.	17, 1909	
Keefe, James.....	Cheshire.....	June	3, 1914	
Keilty, Ellen	Hillsborough	April	15, 1908	
Kelley, Celia, 2d	Coos	Jan.	1, 1905	Sept. 20, 1913
Kelley, Edward.....	Merrimack	June	5, 1913	Aug. 13, 1913
Kelley, Mary.....	Hillsborough	Oct.	20, 1912	Jan. 7, 1913
Kelliher, Kate.....	"	Feb.	14, 1908	
Kelliher, Mary.....	Rockingham.....	May	31, 1913	Feb. 22, 1914
Kelsey, Stanlius V.....	Hillsborough	April	1, 1907	
Kemp, Myra	"	March	17, 1913	
Kempton, Allie O.....	Cheshire	Nov.	1, 1911	
Kendall, Abbie F.....	Sullivan	Dec.	23, 1912	
Keough, Thomas J.....	Grafton	Aug.	16, 1910	
Kerins, Margaret	Hillsborough	June	3, 1910	
Kerrigan, Frank	Grafton	Aug.	30, 1910	
Keys, Delia.....	Coos	Jan.	7, 1909	
Keyes, Louisa	Cheshire	Aug.	12, 1913	
Kidder, Clyde	Hillsborough	Oct.	20, 1913	
Kidder, William H.	Grafton	July	13, 1910	Jan. 10, 1914
Kimball, Jonathan Et.....	Strafford.....	April	31, 1914	May 12, 1914
Kimball, Jonathan Et.....	"	June	1, 1914	July 25, 1914
King, Louise E.....	Hillsborough	Jan.	1, 1905	
Kingsbury, Bertha A.....	Merrimack	May	3, 1912	March 12, 1913
Kimon, Rosalie	Hillsborough	July	22, 1914	
Knapp, George.....	Grafton	Dec.	7, 1910	Oct. 16, 1912
Knottig, Herman.....	Hillsborough	Dec.	24, 1913	Aug. 5, 1914
Knowles, Nathaniel.....	Grafton	Dec.	26, 1913	July 21, 1914
Krowczyk, Joseph.....	Hillsborough	Oct.	30, 1913	Dec. 5, 1913
Kubiak, Pelagia.....	Rockingham.....	March	14, 1907	
Kugler, Eleanor.....	Coos	June	27, 1913	Aug. 24, 1914
LaBeeche, George.....	Hillsborough	Jan.	9, 1913	Oct. 30, 1913
LaClair, Charles.....	Sullivan	Aug.	5, 1913	Aug. 21, 1913
Lacaille, Rosanna.....	Grafton	March	20, 1913	April 5, 1913
Ladd, Hattie	Merrimack	Sept.	16, 1907	
Lafermier, Ovila.....	Belknap	Jan.	26, 1911	
Lafloffe, Mary Ann	Merrimack	June	17, 1909	
LaFond, Emma	Hillsborough	July	19, 1912	
Lafond, Mary	"	Dec.	12, 1912	Feb. 3, 1913
Lafountain, Lewis	Coos	Oct.	19, 1908	
Lafrane, Dolor.....	Grafton	June	3, 1912	July 27, 1914
Lahey, Michel.....	Rockingham.....	July	27, 1910	Aug. 4, 1913
Lally, James	Hillsborough	April	16, 1913	
LaMere, Theophilus.....	"	April	15, 1908	
Lamprey, Chester S.....	Rockingham.....	Aug.	22, 1914	
Landry, Nelson J.....	"	Jan.	6, 1911	
Lang, Frank	Carroll.....	Sept.	3, 1910	
Langford, Thomas	Strafford.....	June	1, 1910	
Lanigan, Matti	Cheshire.....	June	4, 1907	
Lantry, Albert C.....	Merrimack	April	29, 1914	
LaRoche, Frank	Sullivan	April	1, 1907	
Larey, Harley.....	Grafton	June	14, 1909	
Larson, Gustave H.....	Merrimack	Nov.	15, 1912	May 27, 1913
Lasoie, Evariste	Hillsborough	March	27, 1913	
Lavoie, August.....	Strafford.....	Feb.	3, 1913	March 18, 1913
LaVoix, John	Cheshire.....	June	4, 1907	
Lawrence, Lewis.....	Sullivan	April	1, 1907	
Lawrence, William A.....	Hillsborough	March	24, 1913	
Lawziere Frank.....	Coos	April	4, 1913	May 5, 1913
Leach, Libeous A.....	Hillsborough	Jan.	1, 1905	

* Not insane.

† Partial support.

TABLE NO. 7.—*Continued.*

NAMES.	Where from— County.	State aid at State Hospital began.	Date of discharge.
Leaman, Florence	Hillsborough	Feb. 18, 1914	Feb. 21, 1914
Leaman, Florence	"	April 2, 1914	May 2, 1914
Leary, Jennie M.	Rockingham	Feb. 21, 1913	March 24, 1913
Leary, John, 2d	Strafford	Oct. 9, 1908	
Leary, Martha	Carroll	March 14, 1912	
Leash, Minnie	Cheshire	June 29, 1910	July 24, 1913
Leavitt, Dixi S.	Belknap ..	June 3, 1908	
Leavitt, Mary J.	Merrimack	Jan. 11, 1911	
LeBel, Joseph	Hillsborough	March 12, 1913	
Leblond, Rosa	"	Aug. 25, 1908	
LeClair, John B.	"	April 1, 1914	
Lee, Alfred	"	Aug. 31, 1914	
Lee, Charles	Strafford	April 2, 1913	
Lee, Kate	Rockingham	Sept. 2, 1905	Dec. 14, 1913
LeFebvre, Philip	Hillsborough	April 23, 1914	
Leggett, J. Arthur	"	Sept. 19, 1912	Nov. 21, 1912
Lehmann, Frederick	Merrimack	April 30, 1912	Jan. 27, 1913
LeMay, Calixte	Hillsborough	Aug. 17, 1912	
Lemsey, Edith	Carroll	Aug. 6, 1912	Dec. 13, 1912
Leonard, Frank	Hillsborough	Dec. 26, 1913	Feb. 23, 1914
Leonard, Henry C.	"	June 23, 1914	Aug. 14, 1914
Leonard, John	"	Oct. 23, 1907	
Leonard, Katherine	Merrimack	April 29, 1908	
Leonard, Mary	Hillsborough	June 26, 1911	
Lesage, Oscar	"	Dec. 16, 1913	
Lessard, Odolie	Merrimack	Aug. 15, 1912	
Levermoir, Emma	Hillsborough	Jan. 1, 1905	
Levine, Ida	Strafford	Jan. 1, 1905	
Levisque, Audre	Hillsborough	July 22, 1913	
Levisque, alias Lebrec, Cyrille	"	Oct. 23, 1907	
Lewis, James	Strafford	Jan. 1, 1905	
Lewis, Peter	Belknap	June 25, 1913	
Libbey, Ida B.	Strafford	April 1, 1907	
Libby, Forrest B.	Sullivan	Nov. 6, 1913	Dec. 24, 1913
Lindsey, Priscilla H.	Hillsborough	Jan. 1, 1905	
Lique, Frank	Grafton	Jan. 1, 1905	
Little, Frank	"	April 1, 1907	
Little, H. Willis	"	Jan. 1, 1905	
Little, Mae M*	"	Dec. 11, 1913	Feb. 13, 1914
Loach, Charles H. G.	Rockingham	Sept. 28, 1913	
Lock, Henry H.	Strafford	Feb. 25, 1910	
Locke, Arthur L.	"	March 3, 1913	Nov. 19, 1913
Lombard, Minnie	Hillsborough	June 11, 1913	
Lonergan, Bridget	Rockingham	Sept. 19, 1904	
Lonergan, Thomas	"	Nov. 8, 1913	July 1, 1914
Longval, Oliva	Hillsborough	May 4, 1912	Feb. 4, 1914
Loomis, Laura	"	June 11, 1913	
Lord, Georgiana A.	Strafford	June 14, 1910	
Lord, Leon	Carroll	Feb. 20, 1914	
Lord, Norman E.	Rockingham	Jan. 5, 1907	
Loud, Will	Carroll	Jan. 19, 1913	
Lounsbury, John H.	Grafton	Nov. 27, 1907	
Lovell, Fred A.	"	Sept. 20, 1913	Nov. 17, 1913
Lovering, Sarah	Cheshire	Aug. 12, 1913	
Lucas, Eva	Hillsborough	June 20, 1912	Nov. 2, 1913
Lund, Cora B.	"	Nov. 20, 1912	
Lundberg, Hattie E.	Rockingham	Oct. 7, 1904	
Luscier, Eudocis P.	Hillsborough	May 2, 1906	
Lynch, Dennis J.	Rockingham	Oct. 1, 1911	
Lynch, Julia	Hillsborough	Oct. 1, 1907	
Lyons, Ellen	"	Aug. 22, 1911	Sept. 2, 1912

* Not insane.

TABLE NO. 7.—*Continued.*

NAMES.	Where from— County.	State aid at State Hospital began.	Date of discharge.
Lyons, Mary.....	Strafford.....	April 1, 1907	
McAuliffe, Frank.....	Hillsborough.	Oct. 23, 1907	June 28, 1913
McCann, James D.....	Strafford.....	July 27, 1912	
McCauley, Lizzie.....	Hillsborough.....	July 10, 1914	
McClosky, James.....	Belknap.....	Nov. 22, 1913	
McColleston, Sarah C.....	Cheshire.....	Oct. 17, 1906	Aug. 23, 1914
McConnell, Abba M.....	Merrimack.....	Sept. 7, 1909	
McCrillis, William E.....	".....	Jan. 9, 1913	Jan. 17, 1913
McDermott, William.....	Hillsborough.....	March 26, 1914	
McDonald, Angus.....	Rockingham.....	April 1, 1907	
McDonald, Alexander.....	Grafton.....	June 6, 1913	July 26, 1913
McDonald, Daniel.....	Coos.....	May 26, 1913	
McDonald, Ellen.....	Hillsborough.....	June 11, 1913	
McDonald, Nellie E.....	Strafford.....	Dec. 23, 1913	Jan. 21, 1914
McDuffee, Alice C.....	".....	March 24, 1913	April 11, 1914
Macek, Albert.....	Hillsborough.....	Feb. 6, 1914	
McGarey, James.....	Coos.....	Feb. 19, 1910	
McGilvray, Alice M.....	Sullivan.....	Dec. 15, 1910	Dec. 29, 1912
McIlherrin, Ann.....	Strafford.....	Dec. 26, 1912	May 12, 1913
McIntire, Hattie E.....	Carroll.....	April 4, 1906	Aug. 20, 1913
McKay, Eliza.....	Hillsborough.....	Feb. 11, 1914	March 22, 1914
McKee, Agnes.....	".....	Nov. 27, 1912	
McKee, Thomas.....	".....	Oct. 12, 1911	Oct. 9, 1912
McKernan, Thomas J.....	".....	Oct. 14, 1910	
Maeky, Victor.....	Sullivan.....	Jan. 30, 1913	
McLaughlin, Marion.....	Cheshire.....	May 29, 1912	
McLaughlin, Mary.....	Hillsborough.....	June 11, 1913	Feb. 25, 1914
McMahon, James.....	Merrimack.....	Nov. 24, 1913	
McNamara, Mary.....	Hillsborough.....	Jan. 1, 1905	
McQuade, Clara A.....	Carroll.....	April 1, 1907	
McQuade, Nellie.....	".....	Jan. 1, 1905	
McQuade, Teresa A.....	Hillsborough.....	Dec. 30, 1908	
McQuire, Patrick H.....	Strafford.....	June 16, 1914	
Madden, Bridget.....	".....	Jan. 1, 1905	
Mader, Catherine.....	Coos.....	Jan. 29, 1914	March 28, 1914
Magan, Mary.....	Hillsborough.....	Feb. 27, 1911	
Magnan, Lorenzo.....	Merrimack.....	July 29, 1912	
Maher, Philip.....	Hillsborough.....	Sept. 29, 1909	
Mahoney, Bridget.....	".....	June 11, 1913	
Mahoney, Catherine.....	".....	July 29, 1914	
Mainard, Claudia.....	".....	April 17, 1908	
Malloy, John W.....	Coos.....	Dec. 6, 1911	Jan. 1, 1912
Malloy, John W.....	".....	Oct. 7, 1912	Nov. 2, 1912
Malloy, John W.....	".....	July 14, 1913	
Maloon, Nathaniel.....	Rockingham.....	Nov. 8, 1907	
Manderville, John R.....	Grafton.....	Jan. 1, 1905	Feb. 6, 1913
Mandigo, Ella F.....	Hillsborough.....	June 13, 1914	
Mann, Walter.....	Grafton.....	Jan. 1, 1908	
Marchaud, Valerie.....	Hillsborough.....	Dec. 3, 1912	Jan. 10, 1913
Marcous, Alma.....	Rockingham.....	Nov. 14, 1910	
Marquis, Joseph.....	Coos.....	Dec. 10, 1907	Dec. 14, 1912
Marthier, Jaques.....	Merrimack.....	April 1, 1907	Sept. 17, 1912
Martin, Julia J.....	".....	July 13, 1910	
Martin, Lizzie.....	Hillsborough.....	Feb. 24, 1906	
Martin, Samuel.....	".....	May 26, 1914	
Martin, William.....	Carroll.....	Jan. 1, 1905	
Mason, Charles A.....	".....	Jan. 30, 1911	Jan. 23, 1913
Mason, George L.....	Grafton.....	July 19, 1913	Aug. 26, 1913
Mastorianni, Eletta.....	Merrimack.....	Dec. 10, 1912	
Matesik, Celia.....	Strafford.....	April 16, 1914	Aug. 28, 1914
Maynard, Mary H.....	Carroll.....	Oct. 18, 1911	June 15, 1913

TABLE NO. 7.—Continued.

NAMES.	Where from— County.	State aid at State Hospital began.	Date of discharge.
Mead, Anna	Hillsborough....	June 11, 1913	
Meade, Frances.....	Rockingham....	May 31, 1913	
Meehan, Thomas H.....	Strafford.....	May 6, 1913	June 21, 1913
Mercer, Samuel.....	Merrimack.....	July 1, 1904	
Merrill, Blanche L.....	Rockingham....	July 2, 1914	
Merrill, Eliza.....	Grafton.....	Feb. 6, 1908	
Merrill, Elizabeth.....	Merrimack.....	July 4, 1914	
Merrill, Hubert.....	".....	May 9, 1912	Dec. 23, 1912
Merrill, Nellie.....	".....	Sept. 20, 1908	
Messer, Eliza.....	Rockingham....	May 31, 1913	
Messer, Herbert F.....	".....	March 10, 1913	April 14, 1913
Michaud, Rose Anna.....	Hillsborough....	Feb. 7, 1908	
Miles, Charles L.....	Grafton.....	Sept. 1, 1912	
Millett, George.....	Hillsborough....	Oct. 23, 1907	
Millett, Joseph.....	".....	Oct. 4, 1912	
Mitchell, Alice.....	Grafton.....	March 30, 1908	
Mitchell, Jennie.....	Rockingham....	May 31, 1913	
Mitchell, William.....	Grafton.....	Aug. 27, 1914	
Mohlat, Joseph.....	Coos.....	May 12, 1914	
Moineau, Eugenie.....	Hillsborough....	Dec. 1, 1909	
Mongeau, Marceline.....	".....	Jan. 1, 1905	
Moody, Charles.....	".....	April 4, 1913	
Moody, Charles H.....	".....	July 28, 1914	Aug. 11, 1914
Moore, Hannah S.....	".....	Sept. 25, 1911	
Moorehouse, H. rbert E.....	Merrimack.....	May 1, 1912	
Morain, Francis.....	Hillsborough....	Oct. 23, 1907	
Morain, Josephine.....	".....	Jan. 15, 1907	
Moran, Christopher A.....	Strafford.....	Oct. 14, 1912	Feb. 27, 1913
Moreau, Frank.....	Hillsborough....	Sept. 16, 1911	
Moren, Lucia A.....	".....	Dec. 1, 1913	
Moriarty, Charles P.....	Strafford.....	July 31, 1911	
Morin, Cedulie.....	Coos.....	Aug. 7, 1912	Oct. 12, 1912
Morin, Cedulie.....	".....	July 21, 1913	Sept. 23, 1913
Morin, Henry.....	Hillsborough....	Feb. 28, 1911	Feb. 6, 1914
Morley, Marian.....	Merrimack.....	June 30, 1906	April 30, 1913
Morris, John A.....	Grafton.....	Oct. 10, 1913	
Morrison, Blanche E.....	Rockingham....	March 1, 1913	June 21, 1913
Morrison, Charles.....	".....	April 1, 1907	
Morrison, Mary E.....	".....	Aug. 16, 1911	
Morse, Eliza J.....	Hillsborough....	April 21, 1906	
Morse, Nellie J.....	Cheshire.....	Nov. 11, 1908	
Morse, Sidney.....	Grafton.....	Sept. 19, 1912	
Mouiton, Bertha L.....	Sullivan.....	July 19, 1913	
Moulton, Charles G.....	Hillsborough....	Sept. 12, 1908	
Mourley, Bridget.....	".....	July 30, 1908	
Mullen, Joseph H.....	Coos.....	Jan. 21, 1907	
Mullen, Mary.....	Hillsborough....	June 11, 1913	Nov. 21, 1913
Mulligan, James E.....	".....	June 28, 1910	
Nadeau, Eleude.....	".....	Oct. 20, 1913	May 27, 1914
Nelson, Helen M.....	Strafford.....	Dec. 1, 1911	
Nelson, William.....	Cheshire.....	Sept. 1, 1910	Sept. 21, 1912
Newcomb, Lizzie A.....	Grafton.....	Oct. 24, 1908	
Nichols, Alphonse.....	Carroll.....	June 14, 1914	Aug. 8, 1914
Nichols, Joseph.....	Hillsborough....	July 8, 1907	
Noel, Ovide.....	".....	March 30, 1914	June 28, 1914
Nolan, William P.....	".....	Dec. 11, 1912	June 23, 1913
Nolan, William P.....	".....	July 11, 1913	
Normandin, Frank.....	".....	Jan. 14, 1913	
Norsiffe, Cheriffe.....	Strafford.....	Sept. 2, 1911	June 13, 1914
Noury, Alphonsine.....	Hillsborough....	Nov. 4, 1913	Feb. 25, 1914
Noyes, Frank.....	Strafford.....	Sept. 1, 1910	

TABLE NO. 7.—*Continued.*

NAMES.	Where from— County.	State aid at State Hospital began.	Date of discharge.
Noyes, Irving	Coos.....	Sept. 19, 1904	
Nydau, George.....	Rockingham	June 19, 1911	
O'Brien, Lizzie.....	Cheshire.....	Sept. 6, 1910	
O'Brien, Margaret Ann.....	Belknap.....	April 1, 1907	Nov. 5, 1912
O'Connell, Dennis	Coos.....	Oct. 7, 1912	Dec. 21, 1912
O'Connell, Dennis.....	".....	April 25, 1913	Nov. 24, 1913
O'Connell, Kate Head.....	Hillsborough	Jan. 3, 1913	
O'Connell, Michael.....	".....	Oct. 23, 1907	
O'Connell, Mary A.....	Cheshire	Feb. 7, 1914	
Odette, Samuel.....	Coos.....	May 26, 1908	
O'Donald, Mary.....	Merrimack.....	Jan. 23, 1912	
Oleson, Elias.....	Coos.....	Sept. 29, 1908	
Oliver, Irving*.....	Hillsborough	May 7, 1913	
O'Neil, John	Rockingham.....	Jan. 1, 1906	
Ordway, Ella.....	Merrimack.....	March 14, 1903	
Orelle, Octave.....	Hillsborough	April 15, 1908	
Osgood, George G.....	Merrimack.....	Nov. 11, 1910	
O'Toole, John.....	Hillsborough	Jan. 1, 1905	
Ouilette, Olsamine.....	Cheshire.....	Aug. 10, 1913	
Owens, Catherine.....	Rockingham.....	April 3, 1905	
Owens, George F.....	".....	April 1, 1907	
Page, Jane.....	".....	May 31, 1913	
Palmer, James A.....	Strafford.....	Jan. 1, 1905	
Paradis, Emily.....	Hillsborough	July 5, 1910	
Paradis, Zelia.....	".....	March 6, 1912	
Parker, Lucinda.....	".....	June 11, 1913	Aug. 4, 1913
Parr, Margaret.....	".....	Jan. 1, 1905	
Parshley, Frank L.....	Belknap.....	Jan. 14, 1905	
Patterson, Thomas.....	Hillsborough	Dec. 20, 1912	Jan. 10, 1913
Paul, Catherine.....	Strafford.....	July 7, 1913	Aug. 15, 1913
Peran, Eva.....	Belknap.....	April 29, 1914	
Perham, Robert C.....	Hillsborough	Aug. 2, 1913	Jan. 15, 1914
Perkins, Allie.....	Merrimack.....	April 1, 1907	
Perreault, Elmore.....	Strafford.....	Sept. 5, 1912	
Perrotto, Domineque.....	Merrimack.....	Aug. 7, 1913	Aug. 12, 1913
Philbert, Napoleon.....	Hillsborough	June 11, 1913	
Phillips, Mary E.*.....	Merrimack.....	Feb. 7, 1906	
Pickard, Susan.....	".....	Sept. 16, 1907	
Pierce, Edwin.....	Strafford.....	Dec. 11, 1913	Jan. 4, 1914
Pierson, Fred W.....	Cheshire.....	May 26, 1908	
Pike, Rachel S.....	Sullivan.....	Dec. 28, 1907	
Pincence, Ulric.....	Merrimack.....	July 18, 1908	Oct. 5, 1913
Pinkham, Grace G.....	Strafford.....	July 1, 1907	
Pinkham, Lily Abbie.....	Belknap.....	Nov. 18, 1908	March 23, 1913
Piper, George W.....	Merrimack.....	June 27, 1913	July 24, 1913
Piper, Nettie (Hattie) C.....	Carroll.....	Jan. 27, 1914	April 1, 1914
Pippin, Georgianna.....	Hillsborough	March 28, 1913	Oct. 12, 1913
Plourde, Margaret.....	Strafford.....	July 17, 1913	Aug. 7, 1913
Poliquin, Mary.....	Hillsborough	Jan. 1, 1905	
Pollock, Margaret.....	Rockingham.....	Jan. 23, 1913	Dec. 1, 1913
Pollock, Obidiah.....	Grafton.....	Jan. 20, 1913	April 29, 1913
Porter, Eva J.....	Coos.....	Jan. 1, 1905	June 28, 1913
Potter, Sarah H.....	Merrimack.....	Dec. 26, 1898	
Poulin, Joseph.....	Hillsborough	Jan. 24, 1906	
Powell, James.....	Grafton.....	June 1, 1910	
Powers, Lura.....	".....	April 1, 1907	
Pratt, Alice.....	Merrimack.....	Aug. 11, 1914	
Pratt, Josephine.....	Hillsborough	April 1, 1907	
Pratte, Jack.....	Rockingham.....	Oct. 9, 1912	Nov. 26, 1913
Prescorr, Sarah E.....	".....	Feb. 26, 1914	
Pridham, Jennie M.....	".....	Nov. 11, 1907	

* Partial support.

TABLE NO. 7.—*Continued.*

NAMES.	Where from— County.	State aid at State Hospital began.	Date of discharge.
Proctor, Etta M.	Rockingham	Nov. 18, 1913	
Proulx, Mary	Strafford	April 1, 1910	Feb. 7, 1914
Provencher, Josephine	Belknap	April 21, 1914	June 11, 1914
Pulsifer, Ray B.	Grafton	July 20, 1914	
Purington, Flora	Rockingham	May 31, 1913	
Putnam, Emma	Merrimack	Jan. 11, 1911	
Putney, John	Rockingham	Aug. 8, 1912	
Quimby, Fred L.	Grafton	Jan. 1, 1905	Oct. 6, 1912
Quimby, Nellie	Merrimack	July 25, 1911	
Quindley, Mary	"	Jan. 11, 1911	
Quirolo, James D.	Strafford	Jan. 3, 1911	
Raboin, Laura	Hillsborough	Sept. 19, 1913	
Rabouin, Annie	"	Feb. 28, 1914	
Racine, Narcisse	Merrimack	Nov. 27, 1912	Dec. 14, 1912
Ralph, Patrick	"	April 1, 1907	
Randall, Annie	Rockingham	May 31, 1913	
Randall, Willis	"	Nov. 8, 1907	
Raza, Alfred	Hillsborough	April 1, 1907	
Ready, Margaret	"	Jan. 1, 1905	
Reagan, Cornelius	Rockingham	Dec. 1, 1908	
Reagan, Martin J.	Hillsborough	Sept. 3, 1903	
Redigan, Peter	"	Oct. 23, 1907	
Reeves, Jennie	Coos	Jan. 1, 1908	
Reilley, Nellie	Strafford	June 30, 1911	
Remillard, Adolph	Coos	Jan. 26, 1912	
Reynolds, Arthur A.	Belknap	May 2, 1911	
Rhoades, Ella	Coos	Jan. 1, 1905	
Rice, Charles F.	Rockingham	May 8, 1912	Oct. 8, 1913
Rice, Harry	"	June 29, 1909	April 25, 1914
Richard, Cora	Hillsborough	Dec. 31, 1911	Dec. 6, 1912
Richard, Joseph	"	June 26, 1913	
Richards, Charles	"	Dec. 26, 1912	
Richards, Jane	"	June 11, 1913	
Richardson, Alvina	"	June 11, 1913	
Richardson, Mabel	"	March 23, 1912	
Richardson, Mary J.	"	June 11, 1913	
Richardson, Roxanna	Grafton	Feb. 6, 1908	
Rickard, Belle	Sullivan	April 1, 1907	
Ricker, Charles H.	Strafford	Sept. 2, 1907	Nov. 19, 1913
Riley, Edward	Hillsborough	Oct. 23, 1907	
Riley, James	Strafford	Feb. 18, 1910	Feb. 7, 1914
Rines, Warren H.	Carroll	Aug. 17, 1907	
Ripeau, Rose	Merrimack	July 24, 1913	Sept. 21, 1913
Rivard, Mary	Hillsborough	Nov. 28, 1912	
Roberts, Ann	Rockingham	May 31, 1913	
Roberts, Daniel	Coos	April 28, 1913	Sept. 19, 1913
Roberts, Ellen	Hillsborough	June 21, 1913	
Roberts, Emma	Grafton	Sept. 3, 1913	
Roberts, William R.	Rockingham	July 1, 1911	April 2, 1913
Robichaud, Ernest	Merrimack	Jan. 22, 1914	
Robidoux, Charles	Hillsborough	Feb. 24, 1914	
Robinson, Florence	"	Jan. 1, 1905	Aug. 24, 1914
Robinson, George H.	Merrimack	April 1, 1907	
Robinson, Lizzie	Hillsborough	March 19, 1914	
Rock, George	Grafton	July 17, 1913	Aug. 2, 1913
Roers, Edward J.	Belknap	Jan. 10, 1912	
Rogers, Gertrude	"	Oct. 1, 1904	
Rollins, Sarah J.	Strafford	Nov. 20, 1912	
Roper, James H.	Hillsborough	Jan. 1, 1905	
Ross, Annie	"	Aug. 27, 1914	
Rowe, Harry	Strafford	Jan. 1, 1905	July 3, 1913

TABLE NO. 7.—*Continued.*

NAMES.	Where from— County.	State aid at State Hospital began.	Date of discharge.
Rowe, Harry.....	Strafford	Sept. 29, 1913	
Rowen, Bridget.	"	Jan. 5, 1907	
Roy, Phillip.....	"	Aug. 28, 1913	Sept. 20, 1913
Russell, Frank	Cheshire	June 13, 1914	
Russell, Sarah.....	Strafford..	Jan. 1, 1905	
Ryalls, Kenneth W.....	Hillsborough	April 1, 1911	
Ryan, Thomas J.....	Merrimack	Nov. 5, 1912	
Safford, William H.....	Hillsborough	June 1, 1914	
St. Amour, Juliet.....	Rockingham.....	May 27, 1909	
St. Clair, Regina	Grafton	May 5, 1913	
St. Cyr, Napoleon	Hillsborough	April 25, 1914	June 10, 1914
St. Germain, George	Merrimack	March 20, 1913	April 9, 1913
St. Louis, Amanda.....	Hillsborough	July 19, 1911	
St. Saveur, George.....	Rockingham.....	April 3, 1913	
Sanborn, Melvin E.....	Sullivan	Jan. 22, 1912	Nov. 6, 1912
Sanders, Caroline B.....	Rockingham.....	March 19, 1912	
Sawyer, Edith M.....	Hillsborough	June 1, 1911	
Schofield, Stewart.....	Strafford.....	Aug. 4, 1911	
Schrieber, Joseph.....	Hillsborough	Aug. 10, 1912	
Scott, Anna.....	"	Jan. 1, 1910	Nov. 7, 1912
Scott, Margaret.....	Rockingham.....	June 21, 1913	
Scully, Margaret.....	Hillsborough	July 1, 1908	
Severance, Mary A.	Belknap	April 22, 1905	June 7, 1913
Shaw, Melissa.....	Merrimack.....	April 1, 1907	
Shea, James.....	Hillsborough	April 27, 1911	
Shea, William.....	"	April 27, 1911	
Shepard, George	Merrimack	Jan. 1, 1905	
Sheridan, Charles H.....	Coos	Feb. 19, 1913	May 23, 1913
Shorett, Delia.....	"	April 1, 1907	Oct. 19, 1913
Simard, Paul E.....	Hillsborough	Jan. 16, 1913	Oct. 25, 1913
Simes, Alice.....	Strafford	April 28, 1911	
Simonds, Almon	Hillsborough	Jan. 27, 1913	March 27, 1913
Skinner, Flora	Grafton	March 27, 1914	
Skinner, Frank W.....	Merrimack	Aug. 8, 1912	
Sleeper, Frank.....	Rockingham.....	Nov. 8, 1907	
Sleeper, Hattie	"	May 31, 1913	
Small, Mary O.....	Belknap	April 21, 1905	
Smart, Daniel	Carroll	Jan. 1, 1908	
Smith, Bernice.....	Merrimack	March 1, 1909	
Smith, Bessie.....	Rockingham.....	Nov. 13, 1913	
Smith, Charles D.....	Hillsborough	April 20, 1914	June 7, 1914
Smith, Elizabeth.....	Grafton	Feb. 6, 1908	
Smith, Ernest B.....	Belknap	March 21, 1908	
Smith, Etta.....	Hillsborough	Jan. 1, 1905	
Smith, Everett J.....	Rockingham.....	Aug. 20, 1914	
Smith, George R.....	Cheshire	Jan. 1, 1905	
Smith, Osman W.....	Hillsborough	July 1, 1907	
Smith, Vienna.....	Coos	June 21, 1913	
Soucy, Pierre.....	Hillsborough	Aug. 17, 1914	
Spallene, Joseph	Cheshire	Sept. 1, 1911	
Spaulding, Eliza Jane.....	Merrimack.....	Feb. 12, 1908	
Spencer, Julia M.....	Cheshire	March 1, 1911	
Stahl, Charles J.....	Hillsborough	June 9, 1914	
Stannis, Demas	"	March 2, 1909	
Stevens, Charles M.....	"	Jan. 1, 1905	
Stevens, Eugene W.....	Belknap	Nov. 15, 1909	
Stevens, John B.....	Rockingham.....	Nov. 27, 1909	
Stevens, Roy M.....	Hillsborough	July 28, 1913	
Stewart, Mary.....	Coos	Nov. 26, 1912	Jan. 14, 1913
Stiles, Ada H*.....	Belknap	Jan. 4, 1909	
Still, Jesse.....	Hillsborough	July 20, 1911	Dec. 14, 1912

* Partial support.

TABLE NO. 7.—*Continued.*

NAMES.	Where from— County.	State aid at State Hospital began.	Date of discharge.
Stone, Mary F.	Hillsborough	Nov. 1, 1911	
Stone, William	Rockingham	March 3, 1905	
Stone, William E.	Merrimack	May 13, 1914	
Storrs, Lois	Grafton	Feb. 6, 1908	
Strand, Martha	Sullivan	Dec. 1, 1911	
Straw, John E.	Merrimack	June 25, 1913	July 20, 1913
Straw, Ned B.	Sullivan	March 1, 1913	
Strong, Ida C.	"	Aug. 2, 1914	Aug. 10, 1914
Sturtevant, Simeon	Hillsborough	Oct. 20, 1913	Nov. 16, 1913
Sullivan, Annie	"	June 11, 1913	
Sullivan, Edward	Cheshire	Jan. 1, 1905	
Sullivan, Ellen	Strafford	May 6, 1913	July 30, 1913
Sullivan, Eva M.	Hillsborough	Feb. 14, 1908	April 22, 1913
Sullivan, James	"	Nov. 9, 1912	
Sullivan, John P.	Merrimack	April 1, 1907	
Sullivan, J. Henry	"	April 1, 1913	Dec. 39, 1912
Sullivan, Margaret	Hillsborough	Oct. 9, 1909	
Sullivan, Patrick	Grafton	May 9, 1911	
Sullivan, Maggie	Hillsborough	March 23, 1912	
Sullivan, Robert	Strafford	Jan. 1, 1905	
Suzor, Mina	Grafton	Jan. 1, 1905	Sept. 1, 1913
Swain, Annie M.	Rockingham	Oct. 4, 1913	
Swain, Carl	Coos	May 29, 1914	
Swain, Mabel M.	Strafford	Feb. 14, 1910	
Sweatt, George	Merrimack	June 7, 1907	
Syrek, John	Hillsborough	April 7, 1914	
Talbot, Charles D.	"	July 1, 1905	
Talbot, Lillian	Coos	March 18, 1913	July 17, 1913
Taylor, Bert	Hillsborough	June 11, 1913	
Tebbetts, Adrianna	Rockingham	May 31, 1913	
Tenney, Charlie A.	Merrimack	Dec. 30, 1913	July 25, 1914
Terrio, Frank	Grafton	June 6, 1916	
Tetherly, Lucy H.	Strafford	Jan. 1, 1913	
Tewksbury, Elsie	Sullivan	Sept. 22, 1910	
Therien, Zeperin	Hillsborough	Oct. 23, 1907	
Theroux, Eddie	"	April 30, 1909	
Therrien, Louis	Strafford	Aug. 31, 1906	
Thibodeau, Louis	Grafton	May 7, 1912	
Thompson, Anna	Rockingham	Dec. 31, 1912	
Thompson, Arthur	Hillsborough	April 1, 1907	
Thompson, Laura E.	Strafford	April 19, 1913	
Thompson, Mary A.	Hillsborough	June 11, 1913	
Thompson, Merle V.	"	Sept. 29, 1909	
Thurston, Clayton W.	Carroll	May 13, 1914	
Tibbetts, Edna M.	Strafford	Nov. 28, 1912	
Tierney, Bridget	Merrimack	April 1, 1907	
Tillison, Elvira M.	Hillsborough	July 29, 1909	
Topping, Robert M.	"	June 25, 1914	
Towne, Rolinda	"	June 11, 1913	
Towle, George W.	Carroll	June 27, 1914	
Tredick, Julia A.	Rockingham	April 11, 1907	May 12, 1913
Trefethen, Martin P.	"	Sept. 12, 1911	Sept. 13, 1912
Trumbull, Helen	Grafton	Feb. 6, 1908	
Tucker, James H.	Cheshire	April 10, 1903	June 16, 1914
Turcotte, Edward E.	Strafford	June 4, 1909	May 11, 1914
Turcotte, Harry	Merrimack	Aug. 18, 1908	
Turcotte, Joseph W.	Strafford	April 3, 1914	
Turner, Carrie	Rockingham	Dec. 27, 1913	
Turner, Emma A.	Coos	June 3, 1912	Dec. 20, 1913
Tuttle, Myra E.	Rockingham	May 20, 1912	
Twombly, Ada M.	Strafford	April 1, 1907	

TABLE NO. 7.—*Continued.*

NAMES.	Where from— County.	State aid at State Hospital began.	Date of discharge.
Twombly, Aubrey E.....	Carroll.....	March 24, 1914	
Twombly, Etta.....	Rockingham.....	May 31, 1913	
Tylor, Marion.....	Strafford.....	Dec. 28, 1910	
Unknown.....	Hillsborough.....	March 10, 1909	
Unioc, Mamie.....	Merrimack.....	April 4, 1913	Aug. 17, 1913
Vallee, George.....	Strafford.....	Feb. 4, 1913	Feb. 25, 1913
Vallee, George.....	".....	May 25, 1913	Aug. 22, 1913
Varney, Mary E.*.....	".....	July 13, 1914	
Vaultman, Henry H.....	Cheshire.....	Dec. 20, 1910	
Venne, Ellery.....	".....	Oct. 14, 1904	
Vermulen, Martha.....	Hillsborough.....	Feb. 14, 1908	
Vertue, George E.....	Belknap.....	Aug. 26, 1912	Oct. 22, 1912
Voglesong, Hortense.....	Rockingham.....	March 1, 1913	
Von Tell, Joseph.....	Grafton.....	April 9, 1913	May 20, 1913
Wadleigh, Mary J.....	Merrimack.....	Sept. 16, 1907	
Walker, Benjamin*.....	Carroll.....	May 25, 1910	Aug. 7, 1914
Walker, Delia.....	Hillsborough.....	Oct. 17, 1910	
Walker, Frank A.....	Rockingham.....	April 8, 1907	
Walker, Jennie.....	Merrimack.....	Dec. 18, 1910	
Walker, Jennie, No. 2.....	Hillsborough.....	June 11, 1913	
Walker, Martha.....	Merrimack.....	May 6, 1907	
Wallace, Eliza J.....	".....	July 1, 1907	
Wallace, Harriet L.....	Carroll.....	June 9, 1904	Sept. 2, 1913
Wallace, Harriet L.....	".....	Oct. 30, 1913	
Wallingford, Eliza.....	Strafford.....	Feb. 19, 1914	
Wallis, Charles.....	Belknap.....	Aug. 10, 1910	
Watkins, George W.....	Coos.....	Feb. 12, 1912	
Webster, McKnabb.....	Grafton.....	Aug. 23, 1907	Jan. 14, 1913
Weeks, Annie.....	Merrimack.....	Nov. 9, 1913	
Weeks, Joseph P.....	Coos.....	Nov. 30, 1909	April 1, 1913
Welch, John P.....	Hillsborough.....	Nov. 16, 1903	
Welch, Patrick.....	".....	Oct. 23, 1907	
Welch, William.....	Rockingham.....	Nov. 6, 1909	
Welch, William A.....	Merrimack.....	March 1, 1914	
Welsh, John.....	Hillsborough.....	June 30, 1909	
Wentworth, Alice.....	Carroll.....	March 13, 1907	
Wentworth, Annie.....	".....	June 1, 1909	
Wentworth, George L.....	Hillsborough.....	April 7, 1914	
Wescott, Arthur.....	Merrimack.....	April 3, 1914	
Weymouth, Henry G.*.....	Grafton.....	May 31, 1914	Aug. 31, 1914
White, Frank P.....	".....	Dec. 16, 1913	Jan. 8, 1914
White, Hattie.....	".....	Feb. 6, 1908	
White, John.....	".....	April 1, 1907	
White, Julia.....	Rockingham.....	Aug. 1, 1911	Jan. 27, 1914
White, Mary.....	Hillsborough.....	Jan. 1, 1905	
Whitehouse, Maysie.....	Rockingham.....	Jan. 1, 1905	
Whitman, Gertrude.....	Hillsborough.....	July 30, 1913	March 12, 1914
Willard, Winifred*.....	Coos.....	Feb. 19, 1912	
Willett, Edward.....	Hillsborough.....	Oct. 23, 1907	
Willey, Charles W.....	Strafford.....	April 1, 1907	
Willet, William W.....	".....	Nov. 8, 1911	April 15, 1913
Williams, Florence.....	Sullivan.....	Jan. 30, 1914	
Willis, Frank E.....	Cheshire.....	April 8, 1911	April 26, 1913
Wilson, Earle William.....	Hillsborough.....	Nov. 17, 1911	
Wilson, Harry.....	Rockingham.....	Jan. 1, 1905	
Wilson, Henry.....	Hillsborough.....	Oct. 23, 1907	
Wilson, John F.....	".....	Jan. 1, 1905	
Windham, Ellen J.....	Cheshire.....	June 4, 1907	
Winn, Mary E.....	Hillsborough.....	June 11, 1913	
Wiseman, Harry.....	".....	July 2, 1912	Sept. 11, 1912
Wiseman, Harry.....	".....	April 5, 1913	Aug. 18, 1913

* Partial support.

TABLE NO. 7.—*Continued.*

NAMES.	Where from— County.	State aid at State Hospital began.	Date of discharge-
Witham, Thomas J.....	Rockingham.....	March 13, 1909	
Wood, Mary.....	Grafton.....	July 27, 1914	
Woods, Charles O.....	".....	Feb. 5, 1914	
Worcester, George M.....	Strafford.....	April 1, 1903	
Workman, Blanche A.....	Grafton.....	March 6, 1911	
Wright, Henry W.....	".....	Feb. 26, 1913	
Wright, Nora.....	Sullivan.....	Jan. 1, 1905	
Wright, Sarah.....	Hillsborough ..	Aug. 19, 1913	
Wynrod, Andrew.....	".....	April 17, 1914	
Yarrington, Frank.....	Sullivan.....	July 24, 1902	
York, Charles.....	Coos.....	July 21, 1911	
Young, Frank.....	Merrimack.....	July 30, 1901	
Youst, Edward	".....	May 29, 1914	Aug. 6, 1914

TABLE No. 8.—RECAPITULATION.

The following shows the number of commitments, discharges, and deaths at the institutions named, during the year ending August 31, 1913, also the number of inmates remaining at these institutions at the latter date, as shown by the records of the board.

ASYLUMS FOR THE INSANE.	Inmates Sept. 1, 1913.	Committed during the year ending Aug. 31, 1913.	Discharged.	Deaths.
New Hampshire State Hospital.....	1,058	412	167	144
Rockingham County Asylum.....	4	6	24	3
Strafford County Asylum.....	5	1	1	.....
Belknap County Asylum.....	9	1	1	1
Carroll County Asylum.....	2	.....	1	.....
Merrimack County Asylum.....	.....	.....	.....	.....
Hillsborough County Asylum.....	20	11	49	1
Cheshire County Asylum.....	13	.....	7	.....
Sullivan County Asylum.....	7	5	3	1
Grafton County Asylum.....	1	.....	2	.....
Coos County Asylum.....	.....	3	3	.....
Total for State.....	1,119	439	258	150

TABLE No. 9.—RECAPITULATION.

The following shows the number of commitments, discharges, and deaths at the institutions named, during the year ending August 31, 1914, also the number of inmates remaining at these institutions at the latter date, as shown by the records of the board.

ASYLUMS FOR THE INSANE.	Inmates Sept. 1, 1914.	Committed during the year ending Aug. 31, 1914.	Discharged.	Deaths.
New Hampshire State Hospital.....	1,110	366	184	130
Rockingham County Asylum.....	6	1	3	3
Strafford County Asylum.....	10	11	1	.....
Belknap County Asylum.....	4	1	2	.....
Carroll County Asylum.....	2	.....	.....	1
Merrimack County Asylum.....	.....	.....	.....	.....
Hillsborough County Asylum.....	29	16	6	.....
Cheshire County Asylum.....	17	.....	2	.....
Sullivan County Asylum.....	8	1	2	1
Grafton County Asylum.....	.....	.....	.....	.....
Coos County Asylum.....	1	1	.....	.....
Total for State.....	1,178	397	200	135

TABLE No. 10.

Number of inmates at each asylum in the state at close of each fiscal year.

NAMES OF ASYLUMS.	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914
New Hampshire State Hos- pital.	335	365	374	357	368	404	414	424	422	409	427	425	434	464	490	580	643	668	708	831	875	909	938	957	1,058	1,110
Rockingham County Asylum	51	49	48	50	46	55	59	59	67	69	70	74	70	64	54	56	51	48	41	32	30	26	28	23	4	6
Strafford County Asylum ...	42	35	32	51	*	....	....	....	....	....	3	3	3	7	....	4	....	....	....	3	....	....	9	9	5	10
Belknap County Asylum....	11	11	11	9	9	8	8	6	9	9	11	10	8	9	9	8	....	....	5	2	3	4	4	4	9	4
Carroll County Asylum	24	21	20	14	14	14	14	14	11	13	13	12	11	10	10	7	4	4	3	3	2	2	2	3	2	2
Merrimack County Asylum.	46	43	42	43	45	43	46	50	45	47	53	55	57	*	16	25	24	23	14	14	14	11	....	....	....	....
Hillsborough County Asylum	48	61	65	71	76	86	89	93	87	91	85	83	86	90	88	74	72	69	83	47	44	45	37	34	20	20
Cheshire County Asylum ...	15	16	25	20	21	24	34	32	24	35	38	39	39	40	38	37	29	28	23	6	20	23	22	21	13	17
Sullivan County Asylum....	21	14	12	13	13	13	9	7	19	19	22	24	23	26	22	8	8	8	7	8	6	7	4	5	7	8
Grafton County Asylum.....	31	27	30	23	22	21	21	22	22	23	24	21	20	13	14	14	16	15	9	1	1	1	1	1	1	....
Coos County Asylum.....	14	15	15	19	15	16	18	18	24	18	18	14	17	13	12	13	9	12	6	7	6	7	7	6	....	1
Total	634	657	671	670	629	684	712	725	730	733	764	760	768	736	759	826	836	875	899	954	1,001	1,033	1,052	1,063	1,119	1,178

*All transferred to N. H. State Hospital on account of the destruction of the asylum by fire.

FINANCIAL STATEMENT.

EXPENSES OF THE BOARD FOR THE YEAR ENDING AUGUST
31, 1913.

Clerical Expenses (Ch. 197, Laws 1911)—\$500.

Clerical expenses	\$500.00
-------------------------	----------

Incidentals (Ch. 197, Laws 1911)—\$200.

Postage	\$76.56
---------------	---------

Transportation	10.00
----------------------	-------

Typewriter	60.25
------------------	-------

	\$146.81
--	----------

Unexpended balance	53.19
--------------------------	-------

	\$200.00
--	----------

Printing Blanks (Ch. 197, Laws 1911)—\$100.

Ira C. Evans Co., Concord, printing.....	\$3.25
--	--------

Rumford Printing Co., Concord, printing.....	29.50
--	-------

John Carter & Co., Boston, Mass., paper stock.....	7.60
--	------

	\$40.35
--	---------

Unexpended balance	59.65
--------------------------	-------

	\$100.00
--	----------

Printing Report (Ch. 197, Laws 1911)—\$350.

Ira C. Evans Co., Concord, printing report.....	\$225.25
---	----------

Cragg Bindery, Concord, binding.....	12.30
--------------------------------------	-------

Paper stock	12.72
-------------------	-------

	\$250.27
--	----------

Unexpended balance	99.73
--------------------------	-------

	\$350.00
--	----------

EXPENSES OF THE BOARD FOR THE YEAR ENDING AUGUST
31, 1914.

Clerical Expenses (Ch. 41, Laws 1913)—\$500.

Clerical expenses \$500.00

Incidentals (Ch. 41, Laws 1913)—\$200.

Postage \$45.00

Unexpended balance 155.00

\$200.00

Printing Blanks (Ch. 41, Laws 1913)—\$100.

Ira C. Evans Co., Concord, printing..... \$15.07

Unexpended balance 84.93

\$100.00

REPORTS
OF THE TRUSTEES OF THE
STATE LIBRARY

AND THE
STATE LIBRARIAN

FOR THE PERIOD BEGINNING SEPTEMBER 1, 1912,
AND ENDING AUGUST 31, 1914.

VOLUME IX — PART III

PRINTED BY THE CONCORD PRESS, CONCORD

BOUND BY THOMAS W. CRAGG, CONCORD

STATE LIBRARY.

Trustees.

WILLIAM D. CHANDLER, Concord, *Chairman.*

Term of office ends November 10, 1914.

LEE C. ABBOTT, Manchester.

Term of office ends November 13, 1915.

GEORGE W. STONE, Andover.

Term of office ends December 8, 1916.

Librarian.

ARTHUR H. CHASE; Concord. Appointed January 1, 1895.

REPORT OF THE TRUSTEES.

OFFICE OF THE TRUSTEES OF THE STATE LIBRARY,
CONCORD, N. H., August 31, 1914.

To His Excellency the Governor:

We, the Trustees of the State Library, beg leave to submit the Report of the State Librarian for the biennial period ending August 31, 1914.

The fact that we have served as Trustees for only a few months of this period leads us to submit this report without comment.

REPORT OF THE LIBRARIAN.

OFFICE OF STATE LIBRARIAN,
CONCORD, N. H., August 31, 1914.

To the Trustees:

The report of the State Librarian for the biennial period ending August 31, 1914, is herewith submitted.

On November 13, 1912, the term of William F. Whitcher as trustee expired. His successor was appointed on February 7, 1914. On December 8, 1913, the term of William J. Starr as trustee expired. His successor was appointed on February 7, 1914. Therefore during fifteen months of this period there were only two trustees, and the number was reduced to one during two months of the time.

With the board thus incomplete it was not possible to carry forward the development and growth of the library with the same confidence and success as in the past. It was not deemed wise to adopt any new policies at this time. Care was taken that policies already developed to a high degree of efficiency should not suffer, but new work, new ideas and new efforts were postponed until the trustees, who are the governing board of the institution, should be complete.

Thus we have to report that the State Library today stands about where it was at the time of our last report. This means additional work for the future in pushing ahead to a notable position among the State Libraries of the country.

GROWTH OF LIBRARY.

The accessions of bound volumes to the library for the biennial period ending August 31, 1914, has been 6,015 books, making the total number upon the shelves at this date 146,445.

Unbound material has come in in large quantities as heretofore.

Owing to the fact that for nearly a year the board of trustees consisted of two members, and a part of the time of only one, it was not thought advisable to buy new books except those necessary to keep sets complete and to supply requests.

THE LAW DEPARTMENT.

There has been no diminution of effort to keep this department up to the high standard it has attained. We have continued to buy all important American law books as published to the end that the department may at all times furnish a complete working library for our courts and attorneys.

We are confident from the use that is made of this department, and from remarks that attorneys make with reference to it, that it is one of the best working libraries in New England.

We have not as yet gone into the purchase of English colonial reports because the demand for them does not seem to warrant paying the prohibitive price. It will be wise for some future legislature to make a special appropriation for filling these gaps which are the only ones of any importance in the collection.

THE MISCELLANEOUS DEPARTMENT.

Effort has been made to keep up the historical department, and continuations in other departments. When that period shall arrive that assures the management of another time of permanence of policy there will be many matters of future policy to decide.

BINDING.

We are at the present time using more money than usual for the binding of continuations and other unbound matter. Sound policy requires that so far as possible everything upon our shelves should be in permanent binding. The percentage of loss or destruction of unbound pamphlets and periodicals is

very large as compared with that of bound volumes, and to the inconvenience of handling and shelving is much greater.

LEGISLATIVE REFERENCE.

Much has been accomplished along this line during the past two years. A reference catalogue, separate from the regular catalogue, has been started which will before long give information and references upon all current topics of interest.

We may say in this connection that our whole library may be considered a legislative reference department. We are constantly furnishing information upon all sorts of questions to citizens throughout the state. To make a selection of books from the shelves for special reference purposes would not in any way increase their efficiency, while it would seriously interfere with the usefulness of the library as a whole.

As heretofore, we urge everyone to write us for aid upon any question that is troubling them and assure them that we will give it our fullest attention and endeavor to find a satisfactory answer thereto.

LIBRARY ASSISTANCE.

In January, 1913, Otis C. Hammond, who had been assistant librarian for several years, resigned to become director of the New Hampshire Historical Society. It was intimated that it would be very agreeable to the administration if the position of assistant librarian was left unfilled and it was so left. This of course meant the distribution of the work formerly done by Mr. Hammond among the remainder of the library force.

We are pleased to say that the force undertook this additional work without objection and have carried on the work with increased efficiency.

During Mr. Hammond's connection with the library his work was consistent and thorough, and his suggestions as to policy always helpful. His work along historical lines was of the best, and in his present position he should be of great service to the Society and the citizens of New Hampshire.

NEW SHELVING.

The growth of the library has again made it necessary to add new shelving both in the law and miscellaneous departments. In the law department a mezzanine story was added in one of the alcoves and in the miscellaneous department a second story was put upon the stack in the old art gallery.

The capacity of this new shelving is about fifteen thousand volumes and will take care of the new books coming in for about five years.

At the present time the work of moving the books to their new location is going on. Practically every book has to be moved in order to keep the classification intact, and as they are moved they are thoroughly cleaned with the new vacuum cleaner. The work of moving will occupy about three months.

After the capacity of the present shelving is reached there will arise the serious problem of where more shelving can be placed, but this is a problem for the future.

BULLETIN.

The quarterly Bulletin has been published during the past two years as heretofore. The policy has been followed of selecting from other library periodicals those articles that would seem to be best adapted for the small public libraries of our State. Experience has shown that greater results are obtained in this way than by publishing original articles by our own library fraternity.

PUBLIC LIBRARIES.

The only activities possible under the law as it now stands are to give such voluntary assistance as is asked for to the public libraries. Although often presenting the necessity for further activities, and asking for the money to carry them out the legislature has not found it possible, in face of the great demands made upon the treasury, to grant our request.

We shall, as in the past, be very glad to have librarians and trustees of public libraries consult with us upon questions of management or choice of books and assure them that we will give the matter the same painstaking care that we give our own business.

FINANCIAL STATEMENTS.

The detailed financial statements of the library will be found in the reports of the State Auditor as follows:—

Report for the fiscal year ending August 31, 1913, pages 56-58.

Report for the fiscal year ending August 31, 1914, pages 62-65.

As none of the money expended passes through the hands of the library management, they simply approving bills and forwarding them to the Auditor, it has not been thought necessary to repeat the details in this report.

We therefore append an abstract of totals and refer to the Auditor's reports for details.

FINANCIAL STATEMENT, 1912-1913.

	Expended.	Unexpended.
Maintenance of building . . .	\$3,004.43	\$ 95.57
Maintenance of library . . .	1,416.11	843.89
Salaries	5,255.00	985.00
Books	5,884.40	115.60
Expenses of trustees	7.29	142.71
Bulletin	201.73	48.27
	<hr/>	<hr/>
	\$15,768.96	\$2,231.04

FINANCIAL STATEMENT, 1913-1914.

Maintenance of building . . .	\$2,860.36	\$ 389.64
Maintenance of Library . . .	2,077.53	182.47
Salaries	4,830.00	1,530.00
Books	4,248.52	1,751.48
Expenses of trustees		150.00
Bulletin	180.00	69.20
	<hr/>	<hr/>
	\$14,197.21	\$4,072.79

ANNUAL AND STATISTICAL REPORT
OF THE
PUBLIC SERVICE COMMISSION
OF
NEW HAMPSHIRE

FOR THE YEAR ENDING JUNE 30, 1914

INCLUDING THE BIENNIAL REPORT TO THE GOV-
ERNOR AND LEGISLATURE.

VOLUME IV

COMMISSIONERS.

EDWARD C. NILES, *Chairman*.....Concord, N. H.
JOHN E. BENTON, *Clerk*.....Concord, N. H.
THOMAS W. D. WORTHEN.....Concord, N. H.

WALTER H. TIMM, *Assistant Clerk*.....Concord, N. H.
JOHN W. STORRS, *Chief Engineer*.....Concord, N. H.
CHARLES C. BATTEY, *Assistant Engineer, Rail-
road Division*.....Concord, N. H.
STUART A. NIMS, *Assistant Engineer, Public
Utilities Division*.....Concord, N. H.

Printed by John B. Clarke Co., Manchester
Bound by Cragg Bindery, Concord

The Public Service Commission of New Hampshire publishes this report annually under the provisions of section 25 of chapter 164, Laws of 1911, as amended. This volume contains the annual returns of the various railroad corporations and public utilities under the jurisdiction of the commission for the year ended June 30, 1914.

The law requires also that a biennial report be made to the Governor and the Legislature. A report containing a summary of the commission's work for the two years ended August 31, 1914, was first published in advance form, and it is now also included in this volume.

This *Report of the Public Service Commission—Statistical* should not be confused with the series of volumes containing the findings and decisions of the commission published as *N. H. Public Service Commission Reports*. The first two volumes (1911 and 1912) of the annual statistical report contain both the statistical data and the decisions of the commission, but the decisions are now printed in a series of reports separate from the annual statistical reports. The decisions are first presented in pamphlet form, and they are then from time to time published in bound volumes.

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PART I.

BIENNIAL REPORT

to the

GOVERNOR AND LEGISLATURE

1914

STATE OF NEW HAMPSHIRE.

To His Excellency the Governor, and the Honorable Senate and House of Representatives:

The public service commissioners respectfully submit the following report for the two years ending August 31, 1914.

Although the work of the commission is still in a developmental stage, the scope of its activities has greatly broadened during the past two years.

The number of reports and orders issued on formal complaints has so increased during this period that they are now, with the approval of the governor and council, printed in separate volumes annually. And in volumes III and IV of those reports will be found in full all such reports and orders, together with a memorandum, in volume IV, of complaints informally adjusted. These, however, represent but a small part of the commission's work. An equally important part is accomplished by inspections and investigations conducted upon its own motion, without complaint, either formal or informal, as to which no detailed report is printed.

It is reasonable that inquiry should be made whether each department of the state government is accomplishing results which make it worth its cost. That inquiry, if directed to the work of this commission, can be easily and satisfactorily answered.

If there should never again be a single reduction in the price of the service of any public utility brought about through the intervention of this commission, yet the total annual cost of the commission, on a scale of expenditure

very much greater than the present, would be forever paid by the single item of the reduction in the price of gas in the cities of Rochester, Somersworth, Concord and Manchester, accomplished in the first three cases by an adjustment effected without hearing, after complaint, and in the last case by the order of the commission after full hearing and investigation. The annual saving to the people of Manchester by the reduction in the price of gas exceeds the total cost to the state of this commission for the year 1912-13, and very nearly equals that for 1913-14. And this saving will not only continue, but will increase from year to year as the consumption of gas increases.

Further and doubtless equally large savings are effected by the improvement in the heating and illuminating qualities of the gas, which in some cases was of a very low grade, while now all has been raised to a reasonable standard, and will be maintained at that standard.

In Nashua, as one of the terms on which was permitted the transfer to another ownership of the Nashua, Light, Heat & Power Company, new rates are to be put into effect which it is estimated will reduce the cost of electricity for lighting purposes by eighteen per cent.

By forbidding excessive issues of capital stock, the public has been saved from the burden of forever paying dividends upon unduly inflated capitalizations. And the amount so saved in cases in which application has been made to the commission doubtless represents a very small fraction of the unwarrantable issues of securities which would have been floated,—either in excess of actual investment, or to finance worthless enterprises,—had not the law required for all such issues the approval of this commission.

In numerous other ways, upon complaint and upon our own motion, action has been taken which has resulted in better service at the same price, and in the lowering of excessive charges imposed for a great variety of services.

There is no possible question that the administration of the Public Service Act has resulted in direct financial benefits

to the public far outweighing its expense. But the direct financial benefits accruing from the administration of the act are almost inconsequential in comparison with the gain to the state from improved conditions not capable of measurement by the standard of dollars and cents.

The value of human life is incalculable. And it is, of course, impossible by any mathematical formula to determine what lives would have been lost had not one or another precaution been taken. But it is possible to assert that beyond question many persons will in New Hampshire live out their natural life who, but for the administration of this act, would have come to an untimely end through some avoidable accident.

Imperfect methods of train despatching, and imperfect understanding by trainmen of train orders, disclosed in our investigation of the Hampstead wreck, have, in compliance with our order, been largely obviated for the future by a thorough system of inspection of despatchers' records, and periodic instruction and examination of all classes of railroad employees.

The grade crossings of the state have been thoroughly inspected, obstacles to the view removed, and protection in various forms installed wherever needed. The work inaugurated along these lines will soon be completed. And New Hampshire will then have, we are sure, safer grade crossings than any other state in the Union.

The detailed inspection of railroads has resulted in many improvements in the condition of track and equipment. And in particular the inspection of railroad bridges has greatly increased the safety of travel, and in several cases has possibly averted serious disaster.

Better stations have been secured in a number of cases, and better cars, with improvements in heat, light and ventilation.

For the first time in the history of the state there has been a reasonably thorough inspection of steam and other

power boats carrying passengers on our inland waters, and an enforcement of regulations necessary to secure the safe navigation of those waters.

In numerous other ways the comfort and convenience of the public have been enhanced, and fair and courteous treatment of the public by the officers and employees of public service corporations has been enforced.

But the chief gain to the state from the administration of the act is not to be found in pointing to specific things done by the commission. It lies rather in the assurance that the aphorism that "for every wrong there is a remedy" is not a mere statement of an abstract principle, but, so far as the relations of the public service corporations of New Hampshire to the public are concerned, is an accomplished fact.

Not every person deeming himself aggrieved by the action of such a corporation is satisfied with the commission's decision on his case. It is impossible that every decision should be correct, and do full justice to all the parties. But every person receiving or desiring the service of any railroad or public utility can now know that if he regards himself as failing in any respect to receive fair and reasonable treatment, he is no longer obliged helplessly to submit, but has a tribunal to which he can appeal with the assurance that, whatever the limitations of its judgment and abilities, it has at least the power and the disposition to secure for him his just rights.

The value of the commission system of regulation can no more be estimated on the basis of its pecuniary saving to the state than can the value of our courts or our schools.

There follows a report of our work for the past two years, along the various lines on which we have been employed, and such suggestions and recommendations as to needed legislation as we desire to submit.

RAILROADS.

RAILROAD RATES.

Since the organization of this commission we have almost continuously been conducting investigations of railroad rates.

By chapter 196 of the Laws of 1911 it was made the duty of the commission "to investigate fully the subject of steam railroad rates for fares and freights upon the railroads leased or united under the authority of chapter 100 of the Laws of 1883, chapter 5 of the Laws of 1889, or chapter 156 of the Public Statutes, * * and report * * for the information and use of the governor and the legislature, * * not later than December 1, 1912, the general situation in respect to such rates and other related matters, together with such recommendations * * as it may deem proper."

Under that statute a report at very considerable length was made on November 30, 1912. There is no occasion to repeat what was then said. It may, however, be useful to make a brief statement of the facts which led up to the passage of that statute, and of facts which have since occurred, so that the present situation may be easily understood by those who do not care to take the time to read the somewhat extensive report then made.

In 1903 the Boston & Maine Railroad raised all class freight rates then in force twenty cents per ton, and the commodity rates then in force on lumber, granite, brick, ice, sand and manure two dollars per car.

It was publicly claimed that these increases were unlawful because in contravention of a provision substantially similar in form, and found in all the consolidation statutes before mentioned, which provided that "the rates for fares and freights" upon the railroads united under these statutes should not be increased above the rates in force when the acts were passed.

In 1908 the attorney-general filed in the superior court a bill in equity in which it was alleged that the Boston &

Maine Railroad, notwithstanding the limitations as to maximum rates contained in the statutes under which the various roads composing the same were consolidated, was unlawfully demanding and receiving "upon all commodities over its lines" united under said statutes, rates for freights in excess of the rates in force when said statutes were passed. An injunction was asked to prevent said railroad from continuing to collect rates in excess of the maximum rates established by law.

To this bill a demurrer was filed in which it was asked that the proceedings be dismissed upon the following, among other, grounds: that under a true construction of the statutes the bill could not be maintained; and that the authority to regulate commerce between the states was exclusively vested in Congress, and the restrictions in the statutes were therefore inoperative as to interstate rates.

In this case, in an opinion written by Bingham, J., in which all the justices concurred, the demurrer was overruled (75 N. H. 327). In considering the defendants' contention that the statutes could not be construed to prevent reasonable increases, but only arbitrary or unreasonable increases, the court said:

"If this contention is sound, and the act does not provide for a maximum schedule beyond which the rates cannot be raised, then the clause in question would seem to serve no useful purpose; for the act establishing the board of railroad commissioners, which became a law on the same day as chapter 100, and, as the defendants' counsel contend, was a companion piece of legislation with it, provides that it 'shall be the duty of said board to fix tables of maximum charges for the transportation of passengers and freights, * * * and shall change the same from time to time as in the judgment of said board the public good may require.' (Laws 1883, c. 101, s. 4.) If the defendants' construction were to be given the statute, it would be reasonable to suppose that the legislature, having the two measures under

consideration at the same time, would have omitted the provision as to rates from chapter 100, and left the question of maximum rates to be regulated by the railroad commissioners, under chapter 101. This, however, they did not do; and a resort to the proceedings of the legislature leading up to the enactment of the law clearly shows that the language used was not intended to convey the meaning which the defendants seek to place upon it. *On the contrary, it appears that it was intended to limit the power to increase rates on roads leased or united under the act to the maximums stated in the schedules referred to in section 17.*

“Objection is also made by the defendants that the prohibition as to raising rates * does not apply to interstate transportation on such roads; that authority to regulate such transportation is by the federal constitution exclusively vested in Congress. * * * The language of the act is also sufficiently broad to cover all classes of freight shipments on railroads located within the state and leased or united under the provisions of the act; and unless it lies in the mouth of the defendants to take the objection that the legislature did not have the power to annex such a condition, as a limitation upon the authority granted, it is to be inferred that the legislature meant what it said, and intended that it should apply to all shipments over roads situated within the state and leased or united under the provisions of its laws, and not otherwise. *Merrill v. Railroad*, 63 N. H. 259

“It is to be noted in the discussion of this branch of the case, that the act is not compulsory. It does not require the defendants, or any other railroad corporation, to lease or unite railroads and operate them under its provisions, but simply permits them to do so and says, if they do, under what terms and conditions they shall exercise the privileges there conferred. This being so, we are not called upon to decide whether the legislature, having the power to grant or withhold the privilege of leasing or uniting railroads within the state, could grant the same upon the conditions named, if by so doing it would infringe upon some pro-

vision of the state or federal constitution, and no such question is here considered or decided. The question is: The legislature having granted a privilege which it could have withheld, upon the condition that the rates should not be raised above those specified in the act, and the defendants having accepted its provisions, complied with them for twenty years, and exercised the privileges conferred, including the power of eminent domain and the right to levy tolls, for a still greater period, can they, while continuing to exercise them, be heard to question their constitutionality? * * Our conclusion is, that as the statutes here under consideration were permissive and left it optional with the defendants to accept or reject their provisions, by voluntarily accepting them they took the burdens with the benefits and cannot contest their validity."

When this opinion was handed down, apparently everybody understood that it had been decided by the court that any increase in any rates, upon roads to which the statute applied, above the rates in force in 1883 and 1889 was unlawful. Certainly the parties to the suit did. The president of the Boston & Maine Railroad in a letter to the governor of New Hampshire, evidently drafted by counsel, said:

"I understand that on certain lines there has been no increase of rates in excess of those in force at the time of the passage of these statutes, and that it is difficult to determine as to just what lines these statutes are applicable. I shall be very glad, if there is any dispute between the attorney general and our counsel upon these questions, to have them submitted to the Supreme Court at the earliest practicable moment for determination; then the question whether there have been any increases in rates above those existing at the time of the passage of the statutes referred to can be speedily determined. I shall instruct our counsel to raise no questions as to the validity or constitutionality of these statutes, and when it shall be determined what rates are

unlawful, there will be no delay in ordering a restoration to the lawful basis.

"With these statutes remaining in force, such a restoration will produce many inequalities, and discriminations, and I believe that it will be better, in the interest of the shipping public, if the present schedule can be maintained until the whole situation can be dealt with by the legislature upon an equitable basis. If the public is to be properly served, it is, in my judgment, essential that a legal way should be provided whereby the rates now in force may be maintained. I do not understand that any serious question has been raised that these rates are unreasonable, but the public very properly objects to any rates, whether reasonable or not, that it believes to be in violation of a statute."

The governor replied to this letter expressing his satisfaction therewith, and, at the term of the superior court then pending, a case was transferred to the supreme court upon an agreed statement of facts for the purpose of determining what lines composing the Boston & Maine system were subject to the rate limitations of the consolidation statutes before mentioned.

On February 11, 1911, the supreme court handed down an opinion (76 N. H. Rep. 146) in which it was held that the limitation applied to all of the Boston & Maine system except lines not in operation in 1889 and the Claremont, Portsmouth, Suncook Valley, Peterborough, Franklin & Tilton and Sullivan County lines.

This was the situation when the legislature of 1911 was in session. A bill was introduced early in that session to repeal the limitations contained in the statutes. By resolution this bill was referred to a special committee which held extended hearings thereon. Counsel for the Boston & Maine Railroad appeared before the committee in support of the bill, and in their opening remarks said in part:

"I come to a painful subject, and that is the statutes of 1883 and 1889. * * * Now, you all know that the Boston & Maine system is made up of a great many independent railroads, many of which were independent operating railroads. As a matter of fact the Boston & Maine Railroad is made up of 117 distinct railroad corporations. * * * Now, in authorizing those consolidations, provision was placed in the statute of 1883 that rates on the leased lines should not be raised beyond the rates in existence on August 1, 1883. Now, in those days it was thought that that was the only sort of restriction which a legislature could properly and safely place upon the railroads. * * * Human nature is such that you must provide means of regulating us, but, as I say, in those early days the only means of regulation was a rigid statute. Now, today, under modern methods, gentlemen, under advanced ideas, we have other ways—you have other ways of holding us in check, and those other ways are the commissions, the Interstate Commerce Commission which governs railroad rates so far as they are interstate rates and state commissions which govern intrastate rates. * * * Now, gentlemen, we come down to our act of 1903. * * * Now, in making this increase, amounting to one cent per hundred pounds on all articles between different points on the Boston & Maine Railroad, with the exception of certain articles such as lumber where the rate was \$2 a car, or less than one cent per hundred pounds, and brick and manure, sand and some coarse articles of that kind where the increase was about one-half cent per hundred pounds, now, in doing that some rates were raised beyond the lawful limit of 1889 and 1883. I am not here to condone that act of the railroad. The situation that confronted the directors seriously was they did not know how to raise their rates without raising all their rates, and thereby they violated a law—and any violation of law cannot be condoned in any way, much less in a great and powerful corporation. The influence of the

action of the violation of law by a great and powerful corporation is so far-reaching that it tends to demoralize society. It tends more than anything else to make disrespect for the law. So there is the situation which we find ourselves in. We are not excusing it, we are not justifying it. We cannot. * * *

Counsel further said: "The fundamental proposition we are trying here is, should these statutes be repealed? * * * The common impression has gone abroad throughout the state in the last two years that the increase of rates of 1903 meant a universal increase on everything in New Hampshire that the Boston & Maine Railroad carried. That is an impression which must be removed because it is not the fact. * * * In 1883 every little road in New Hampshire, whether five miles long or fifty, had a special classification of its own. * * * The tariff sheets of each road was gotten up entirely independent and regardless of the tariff sheet of the other New Hampshire roads. * * * The tendency then seems to have been * that transportation freight costs were made very low between stations on the same road and were made high to stations on another road. * * * We will satisfy you that where the railroad has increased the transportation charges on one item of merchandise it has made a decrease on many more. * * * Substantially everything in common use in New Hampshire shows a net decrease in the freight charge today as compared with 1883. I don't say everything, but substantially everything. * * * The railroad has no right to maintain rates in excess of what they were in 1883 and 1889. Now, then, you say—the state says, they must be restored back—reduced that means. * * * It is not an equitable proposition. The railroad * has increased some and reduced many. * * * Is it fair for the state to step in and say you have got to cut down, but you can't raise over your present rates? That is what it will come to. If commodity rates are restored to the 1883 basis, we will satisfy you that the big industries

of New Hampshire could not survive, and if the big industries of New Hampshire could not survive, then the Boston & Maine Railroad in New Hampshire could not survive."

Upon the close of the hearings the committee reported in part as follows:

"The railroads have reduced a large number of their rates below those in force at the time they were granted permission to unite. On the other hand, the railroads, contrary to the restrictions in these statutes that no rates should be increased above those in force at the time the statutes were passed, have increased their rates above those in force at that time without authority and with full knowledge that such increases were illegal and contrary to the rights of shippers, and these rates are now in force and are being collected.

"It is impossible for the committee on the information before it to find how many of the rates for fares and freights in New Hampshire have been increased above the legal rates or what the amount in money involved in such increase is."

The recommendation of the committee was that the rates in force should be continued pending an investigation by the public service commission. Said chapter 196 of the Laws of 1911 was the result of this recommendation. That act was general and applied to the Maine Central as well as to the Boston & Maine, but it was the situation existing on the latter road which was the cause of the statute.

The investigation made by the commission covered both roads. We found, however, and stated in our report, that upon the Maine Central Railroad a substantial reduction in passenger fares had been made, and that there had been no material increase in either class or commodity freight rates.

Upon the Boston & Maine Railroad we found that there had been a substantial reduction in passenger fares. As to freight rates, by reason of changes in classifications, and by reason of the consolidation of many roads, whereby through rates now apply to shipments which formerly

moved under two or more local rates, we found it extremely difficult to determine just what rates had been raised. The changes in classification, and the establishment of through rates, operated to effect reductions, which in considerable part offset, and in some cases exceeded, the increases made in 1903. Upon some parts of the system, therefore, it appeared that both class and commodity rates were generally lower than in 1889, while on other parts class rates were in excess of the rates of 1889. It also appeared that generally the commodity rates on lumber, brick and granite were higher than in 1889, and in some instances the same was true of commodity rates on ice.

For the purpose of determining the importance to the state of the increases, the commission caused a test to be made by applying to the traffic actually moved to or from New Hampshire to or from other points on the Boston & Maine system on twelve selected days in 1911 the 1889 rates, and by comparing the results with the collections actually made on the days in question on such traffic. The excess in amount actually collected over what would have been collected under the rates which would have been applicable in 1889, multiplied by 26, assuming 312 working days in the year, was treated as the approximate amount of the annual revenue received by the Boston & Maine Railroad as a result of its increases in freight rates over the supposed legal maximum fixed by the consolidation statutes. This amount, as so determined, was found to be \$133,370.69.

In connection with this test, the Boston & Maine Railroad also presented the result of a similar test, not required by us but voluntarily made by the railroad, showing in the same way the New Hampshire traffic moving under rates which were lower than the rates applicable to such traffic which were in force in 1889. This test indicated that upon such traffic, had the only rates applicable in 1889 been in force, and had the same traffic moved, the railroad would have collected \$426,803.52 more than it did in fact collect.

The claim of the Boston & Maine Railroad was that this amount was a clear saving to the shippers of the state. The fallacy of this claim was, however, pointed out in our report at considerable length. It was shown that a large part of the traffic could not have moved under the rates applicable in 1889, because those rates were so high as to be absolutely prohibitive for the movement of traffic of the character in question.

Such examples were given, from the traffic shown by the test, as cement shipments from North Adams to Manchester, upon which the rate collected was \$48.45, while the 1889 rate applicable was made by a combination of two local rates amounting to \$119.70; trap rock shipments from Massachusetts points to Manchester, 1889 (class) rate applied \$246.08, 1911 (commodity) rate \$82.37; trap rock, Salem to Keene, 1889 (class) rate \$803.66, 1911 (commodity) rate \$195.71; sewer pipe, Portland to Dover, 1889 (class) rate \$46.24, 1911 (commodity) rate \$17.40; lumber, Boston to Manchester, 1889 (class) rate \$103.09, 1911 (commodity) rate \$44.77; oil Beverly to Manchester, 1889 (class) rate \$74.48, 1911 (commodity) rate \$47.88; poplar wood, Littleton to Wolfboro Falls, 1889 rate (sum of two locals) \$48.84, 1911 (single commodity) rate \$15.95; manure, Boston to Keene, 1889 (class) rate \$49.92, 1911 (commodity) rate \$22.69. Other examples were given of low rates granted to make possible the establishment of industries which were not in existence in 1889.

To understand the entirely imaginary character of such claimed decreases, the distinction between class rates and commodity rates must be kept in mind. Class rate schedules are designed to provide a rate applicable to any shipment of any character that may be offered for transportation between any two shipping points. This is accomplished by establishing between such points a certain number of rates, and dividing all commodities which may be offered for transportation into as many classes as

there are rates established, and applying a given rate to all commodities of whatever kind in a given class. In the Official Classification in use in this territory there are six classes, and into these six classes the Official Classification distributes all of the approximately 10,000 known commodities that may be offered for transportation. These class rates constitute the general rate fabric of the railroad, and enable it to do business, with every agent in every station instructed as to the rate which he shall apply to any possible shipment which may be offered him to send to any point, so that when a shipment is offered it may go forward without delay.

It is indispensable that the railroad should have such a set of rates under which general business may be done. But it is known that no schedule of rates of general application will cover all business. In fact, the business which will move under such general rates is but a fraction of the whole freight traffic. In the 1911 rate investigation it was found to be not more than 30 per cent.

Macadam roads would not be built with trap rock moved at class rates; sewer pipe would not be bought in Portland and shipped to Dover at class rates, while it might come from some other city by commodity rates; poplar excelsior stock would not move at a rate which would consume the full profit to be made from its manufacture; the Gulf Refining Company would not establish a great oil distributing plant at Beverly and pay class rates from there, when all other distributing points have commodity rates; shoe shops could not be established at Littleton and Newport, and leather board mills at Bath, without commodity rates, nor could the great bulk of the manufacturing business of New Hampshire be done at class rates in competition with other sections enjoying commodity rates.

The fact is that the class rate schedules do not make a complete system of rates, and are not intended to make a complete system. They are designed merely to give to the railroad a set of rates which shall apply to shipments of

general merchandise and to other casual shipments of any commodity. It is expected that the class rate schedules will be supplemented with lower rates when lower rates are needed. For freight which cannot move under the general class tariffs, rates must be made to fit the particular needs of the particular business offered or sought to be developed. These are termed "commodity rates," and in amount are generally some specified percentage of the applicable class rate. Under present laws, federal and state, these rates are published in the form of tariffs, and are open to all shippers in the locality for which established. In the early days they were quite commonly extended not to localities, but to shippers, and did not appear in the form of tariffs. This was found to have been the fact as to New Hampshire, prior to the passage of the consolidation acts, in spite of statutory provisions intended to prevent discrimination. Accordingly, it is now impossible to discover what rate was collected upon a large proportion of the traffic moving at less than class rates.

Rates lower than class rates, whether granted as special rates to individuals upon commodities shipped by such individuals, or as commodity rates to certain localities, upon commodities to be produced at or shipped to such localities, must be established for the bulk of the freight transported by any railroad, and these rates cannot ordinarily be fixed until the occasion for their use in any locality arises, since the main consideration, on the part of the railroad at least, in determining the percentage of the class rate which shall be adopted, is to fix a rate that is low enough to cause the traffic to move, but not lower than is necessary for that purpose.

In a sense, therefore, it may be accurately said that for a large portion of the business now moved by the Boston & Maine Railroad there were no rates in 1889. The business was not then existent, and no rates applicable thereto under which the traffic could possibly move had been made. Rates which might have been applied were in

existence, but they were intended to apply merely to general merchandise shipments, and not to the traffic which has since developed.

If a rate is so high that shipments cannot be made, it is in reality, so far as shippers are concerned, no rate at all, and the public is not affected by changes therein, whether up or down, until it is brought to a point where shipments may move thereunder. It would seem to be quite clear that commodity rates, made for traffic which was not in existence in 1889, which traffic could not possibly be now in existence under class rates, should not be compared with the class rates of 1889, which were made for an entirely different kind of traffic.

In our report we stated that the amount involved in the increases in rates which had been advanced since 1889 was not sufficient to be of great consequence, either to the railroad or to the state, but we called attention to the fact, disclosed by the investigation, that the rate schedules upon the Boston & Maine Railroad were unscientific, antiquated and highly discriminatory as between different sections of the state and different kinds and classes of traffic, and we recommended that such legislative action be taken as would result in the establishment, in place of the existing rates, of a rational, fair and scientific maximum schedule of rates, covering traffic between all points in New Hampshire and all other points on the Boston & Maine system in New Hampshire and elsewhere, subject to revision by this commission from time to time, as changed conditions might require. It was recognized in our report that the course suggested would require the explicit acceptance of the Boston & Maine Railroad, because it contemplated the substitution of a new maximum scale for that believed to be then in effect as a result of the limitations contained in the consolidation statutes before mentioned.

Pending action by the legislature upon this report, the Boston & Maine Railroad appeared before the legislative com-

mittee having the report under consideration and represented that, subsequent to the close of the investigation covered by the report of the commission, it had suffered such a decrease in net revenues as to make it imperative that it should be allowed to advance its rates.

The committee finally introduced a bill which was passed and approved, becoming chapter 106 of the Laws of 1913. By this act it was provided that if on or before July 1, 1913, the Boston & Maine Railroad should file a stipulation and agreement, in form prescribed in the act, accepting the terms of the act, and requesting the public service commission "to prepare rational, fair and scientific maximum schedules of rates for fares and freights covering traffic upon all lines owned or operated under lease, contract or otherwise, between all points in the state of New Hampshire and other points in said state * and points on such railroad outside said state," the railroad should have authority until October 1, 1914, to demand and collect rates for fares and freights then in force in excess of the maximums prescribed by statute.

It was also provided that in the event of filing such stipulation the Boston & Maine Railroad should pay to the state treasurer the expenses incurred in the investigation made by the commission under chapter 196 of the Laws of 1911.

Upon the filing of the stipulation and agreement it was made the duty of the commission to proceed forthwith to prepare and deliver to the railroad complete schedules, as requested therein, "as soon as practicable, in any event prior to January 1, 1914." After that date, however, the commission was given power to correct and amend the schedules then delivered.

The act provided that after the delivery of maximum schedules to the railroad, tariffs conforming thereto might immediately be put into effect experimentally, and continued in force until October 1, 1914. If prior to that date the railroad filed a "request and agreement" in form

as provided in the act, requesting the commission to fix a date not later than October 1, 1914, upon which the new maximum schedules should become substituted for the existing legal maximum rates, and covenanting and agreeing in consideration of such substitution "that the rates for fares and freights charged by said railroad * shall not be increased as to any single rate beyond the maximum fixed therefor by such new schedules," the commission should make an order that the new maximum schedules should, upon a date fixed by the commission, not later than October 1, 1914, "become substituted for the existing legal maximum rates for fares and freights * and that said new schedules from and after the date so fixed should be the legal maximum for fares and freights."

The act was approved April 29, 1913. The railroad did not, however, take any immediate action thereunder. At that time there was pending in the supreme court the case of Clough et als. v. Boston & Maine Railroad, wherein the plaintiffs sought to recover charges which they had been obliged to pay, in excess of the rates of 1883 and 1889, upon certain shipments both interstate and intrastate upon various lines of the Boston & Maine system. In this case the railroad had made a brief statement of defence in which it had alleged that the rates paid by the plaintiffs were not unreasonable, but were the rates fixed by the defendant's regularly established tariffs, and charged to all shippers for like service; that the consolidation statutes mentioned did not forbid reasonable increases in rates on particular commodities, provided such increases were offset by decreases in other commodities, so that no greater sum in the aggregate was collected than would have been collected if the rates of 1883 and 1889 were in effect; "that during each year covered by the plaintiffs' shipments, while some of the rates for the transfer of lumber between certain points, and on other particular commodities in certain instances, exceeded the corresponding rates in 1883 and 1889, such excess was

much more than offset by decreased rates on lumber between other points, and on other commodities, and that, on the whole, the rates were not increased * but on the contrary much less than * * * had the rates of 1883 and 1889 remained unchanged;" that during each year covered by the plaintiffs' shipments the aggregate sum collected by the defendants in freight rates was \$500,000 less than the same would have been had the rates of 1883 and 1889 remained unchanged; that in each said year the cost of passenger traffic to the public has been reduced \$500,000 annually by reason of reductions in passenger rates; that said decrease in passenger and freight rates had resulted in a large net decrease in the amount paid by the public below what would have been paid if there had been no decrease in the rates of 1883 and 1889.

The defendants had further set forth that if the rate limitations in the statutes of 1883 and 1889 did inhibit the increase of any particular rate, the plaintiffs could not recover, among other reasons, because, in the case of rates on interstate shipments the repayment demanded "would be a violation of the penal provisions of the Interstate Commerce Commission Act and amendments thereto, inasmuch as the rates collected were lawfully filed and published according to the provisions of said act."

If the railroad sustained its position taken in the Clough case, that the limitation in the consolidation statutes was general and not specific, and that there was no violation of law if the total sum collected on all traffic under present rates was not more than would be collected under the same traffic if the same had moved under the rates of 1883 and 1889, the supposed restrictive effect of the consolidation statutes would practically disappear on account of the large traffic now moving under low rates not in existence when the statutes were passed, and for other reasons that will be later stated.

Accordingly, the railroad delayed taking any action pending an opinion in the Clough case, which was ex-

pected to be handed down in June, 1913. On June 27, 1913, an opinion was given of which the following is the substance:

"A portion of the charges here complained of were on interstate shipments. As to these the defendant alleges that they were collected according to rates lawfully filed and published according to the provisions of the interstate commerce acts. This is a valid defence. It is settled by a line of uniform decisions of the Supreme Court of the United States, that once schedules are so filed and published, the sole remedy of the shipper is by a complaint to the Interstate Commerce Commission. This jurisdiction cannot be infringed upon by previous contract of the parties, nor by statutes enacted by the states. It cannot be defeated directly or indirectly. * * *

"If the rates here filed contravened the terms of a contract made with the state by the defendant, or were contrary to the provisions of a state statute theretofore existing, the contract or the local law must yield to the power of congress to act upon the subject. The question what effect this may or may not have upon the leases and contracts of union made under the state statute is one which the present controversy does not present. As the validity of the defence is so clearly settled by federal authority, it is not necessary to now determine whether the statutes here under consideration were or were not intended to apply to any part of interstate carriage.

"No conclusion has been reached as to the other question involved in the case. The decision of this point is announced at this time, as it is understood that the state and the defendant desire to take action upon the subject under the statute passed by the last legislature. All concurred."

The main part of the case was thus left undecided and the railroad was obliged either to file the stipulation and agreement provided for by said chapter 106, or face the demand on July 1, 1913, that it return to the rates of 1883 and 1889. On the last day permitted by the act,

the railroad filed a stipulation and agreement in the precise form prescribed in the act, but with the addition of the following paragraph:

"This agreement is executed according to the form prescribed by the act approved April 29, 1913, with the understanding that it is to have no effect inconsistent with the law as declared by the Supreme Court of New Hampshire in *Clough v. Boston & Maine Railroad*, decided June 27, 1913, and that because of said decision it shall not be construed as a request to the public service commission to prepare maximum schedules of interstate rates."

Upon the filing of this stipulation the commission was for some time in doubt as to its jurisdiction to proceed thereunder. The matter was laid before the governor and council, who took the opinion of the attorney-general. The entire correspondence is set out in our report under chapter 106 hereafter referred to, filed December 31, 1913. (4 N. H. P. S. C. Rep. 67.)

The executive committee of the board of directors of the Boston & Maine Railroad, having been authorized to act by vote of the board of directors, finally passed a resolution declaring the purpose and intent of the railroad in filing the stipulation as follows:

"Resolved: That the Boston & Maine Railroad by its stipulation filed July 1, 1913, with the Public Service Commission of New Hampshire, intended to comply with the statute of April 29, 1913, so far as it legally may, and to request said commission to prepare maximum schedules of rates, both intrastate and interstate, as provided by an act entitled 'An act to provide a method for adjusting the Maximum Rates for Fares and Freights of Steam Railroads,' approved April 29, 1913, in so far as under the decisions of the Supreme Court of New Hampshire in *Clough v. Boston & Maine Railroad*, decided June 27, 1913, and under the constitution and laws of the United States, it legally may, and it desires that said stipulation be so interpreted."

The commission accordingly proceeded to the preparation of complete maximum schedules, both interstate and intrastate, as provided by the act. So much time, however, had been consumed by the delay of the Boston & Maine Railroad in filing the stipulation and agreement, and by the proceedings incident to the form in which it was filed, that it was impossible to complete the revision of schedules before January 1, 1914. Indeed so great did the task prove that it is evident that it would have been impossible, without extraordinary expense, even if no time had been lost.

We did, however, on December 31, 1913, make a full report of our proceedings under the act to that date, and delivered to the Boston & Maine Railroad a schedule of class rates in a general order continuing all commodity rates and rates for other freight services and all passenger rates in force, until the order should be later corrected or amended. This order was No. 251. Both report and order will be found in our 1914 report (4 N. H. P. S. C. Rep. 67).

In the investigation made under said chapter 106, we were aided by the coöperation of the Interstate Commerce Commission and the commissions of Maine, Massachusetts and Vermont. Upon the invitation of the federal commission a conference was held in Boston, presided over by Commissioner Prouty of the federal commission, and participated in by all of the commissioners of the states mentioned and the commissioners of this state, for the purpose of considering the application of the Boston & Maine railroad for leave to increase its freight and passenger rates.

The Boston & Maine Railroad appeared before the conference and introduced a large volume of testimony bearing upon its financial condition, and its need of increased revenue. Adjournment was taken to give shippers an opportunity to be heard, and the adjourned hear-

ing was advertised by this commission in all the counties in the state.

After fully hearing all parties desiring to be heard, and after careful consideration of the evidence, and of all facts known to the commissioners, the conference issued a statement, joined in by all of the commissioners who participated, setting forth the conclusions upon which the commissioners were in agreement. This statement was incorporated in full in our report of December 31, 1913. In it the conference expressed the belief that upon the basis of rates then in force the Boston & Maine Railroad was bankrupt. It was recognized that to some extent this financial condition was due to mismanagement and improvident contracts and leases, but on the other hand it was pointed out that many things over which the management had no control had contributed towards the situation in which the railroad was found. Increased car rentals and increased wages were instanced. The item of car rentals in 1909 was \$626,000, and in 1913 \$1,478,000. Wage increases alone were estimated by this commission in its report of December 31, 1913, to have caused an added operating cost of not less than \$3,000,000 annually.

The conclusion of the conference was that such changes in rates ought to be permitted as would give to the Boston & Maine Railroad an increased revenue. The conference agreed upon a schedule of class freight rates which was included in said statement, and also agreed upon a plan for readjustment of passenger fares. This latter matter will be hereafter referred to under "Passenger Rates."

In our report of December 31, 1913, we adopted this schedule of class freight rates, and delivered the same to the railroad as a maximum schedule of class rates. All other freight rates and passenger rates, as has been stated, were included in the schedule by a general order which continued the same in force till by subsequent order they should be revised by the commission, under its power to make amendment and correction.

Concerning the class rate schedule promulgated by the conference of commissioners, and concerning further revision of other rates, we said in part:

"The principles suggested (by the rate expert of this commission) for the construction of the class rate scale were adopted by the conference, and the proposed rates themselves were prepared for the conference by him and by Mr. C. P. Clark, the rate expert of the Massachusetts commission.

"The result is highly satisfactory to this commission, because it will place upon the heavy traffic of Massachusetts, which has heretofore in large part enjoyed rates unduly low in comparison with like traffic in New Hampshire, a fair proportion of the rate burden. The proposed scale will equalize rates over the entire Boston & Maine system.

"The result in New Hampshire will be a reasonable increase in the aggregate. This will fall upon sections of the state which enjoy existing rates unduly low in comparison with other sections of the state, or not in themselves fairly remunerative. Some sections will continue under practically the same rates as at present in force, and in other sections reductions will result. The object aimed at by the conference in the approval of the schedule now adopted has been the elimination of discriminations upon the entire Boston & Maine system, accompanied by a reasonable increase in revenue.

"In the revision which we shall hereafter make, we shall pursue the same object. Patent discriminations will be eliminated. Advances will be permitted in rates clearly low or unremunerative. Rates which have in the past been advanced to a point where further advance would be unreasonable will be held at their present level, or, when found unreasonable, reduced. A reasonable increase in total revenue will be aimed at.

"In the performance of its work, the commission will welcome suggestions and information from interested shippers. Such shippers are invited to communicate with the commission in any way and at any time while matters affecting them are before the commission."

Subsequent to the filing of said report of December 31, 1913, and the making of Order No. 251, and prior to October 1, 1914, eighty-two further orders were made in amendment and correction of schedules other than those applying to class rates. All of these orders made prior to September 1, 1914, are printed in volume IV of our reports, and all those made subsequent to that date are printed in volume V, and may be found in section No. 1 of the advance sheets, the orders printed in each volume being as follows:

VOLUME IV.

Order No. 270	Order No. 296	Order No. 329
" " 271	" " 297	" " 330
" " 272	" " 298	" " 332
" " 273	" " 299	" " 333
" " 275	" " 301	" " 334
" " 276	" " 303	" " 335
" " 277	" " 307	" " 336
" " 278	" " 308	" " 337
" " 279	" " 309	" " 338
" " 280	" " 311	" " 340
" " 281	" " 312	" " 341
" " 283	" " 313	" " 342
" " 284	" " 317	" " 343
" " 285	" " 318	" " 353
" " 286	" " 319	" " 354
" " 287	" " 320	" " 355
" " 288	" " 324	" " 356
" " 289	" " 325	" " 357
" " 290	" " 326	" " 358
" " 291	" " 327	" " 359
" " 295	" " 328	" " 360

VOLUME V.

Order No. 373	Order No. 380	Order No. 393
" " 374	" " 381	" " 394

Order No. 375	Order No. 385	Order No. 395
“ “ 376	“ “ 386	“ “ 396
“ “ 377	“ “ 390	“ “ 397
“ “ 378	“ “ 391	“ “ 398
“ “ 379	“ “ 392	

In the course of the investigation required by said chapter 106, both before and after the date of the filing of the said report of December 31, 1913, a great number of public hearings were held, and every means possible was taken to secure the participation of shippers therein, so that the commission might be fully informed of all facts which ought to be taken into consideration in framing the schedules to be delivered. The schedules finally delivered under the above mentioned orders covered the entire structure of rates for freight service not already covered by the class schedule delivered in Order No. 251. In their preparation the course outlined in our report of December 31, 1913, has been followed; and we believe that if put into force, and continued in force, the Boston & Maine will have a system of rates which may be described as scientific, because it will distribute the transportation burden among the shippers and communities served in a fair and rational manner, and will give to the railroad from the traffic which it moves all that it fairly ought to be permitted to collect in view of all the circumstances entitled to consideration.

These schedules, as we have before stated, apply to all traffic between points on the Boston & Maine system, one or more of which points are in New Hampshire. It is clear that since these schedules, if adopted, were to apply to and govern the rates on New Hampshire shipments when moving to or from points on the Boston & Maine system in Maine, Massachusetts and Vermont, their adoption in many cases might create inequalities and discriminations in those states unless the schedules were extended to all traffic upon the entire system. This course

was followed by the railroad, and from time to time tariffs have been filed to put into effect upon the entire system rates in conformity with the provisions of the afore-said schedules.

The tariffs applicable to class rates were the first to be filed, and became effective April 1, 1914; other tariffs have been filed from time to time, most of which have already taken effect, but some, filed within the past month, have not yet become effective, because the time required for the statutory notice to the public has not yet passed. Tariffs under ten of said orders have not yet been filed. Of these only three or four are of any considerable importance.

The railroad has been asked as to its intention with reference to the filing of tariffs under said orders and its replies may be summarized as follows: two of the orders did not contain schedules, but merely permitted commodity tariffs to be cancelled and the appropriate class rates, fixed by Order No. 251, to be taken as the maximums applicable to the commodities covered. Cancellations have not yet been filed, though it is intended by the railroad that ultimately they shall be; in the meantime the lower rate is continued. Tariffs under two of the orders have been prepared, are now in course of printing, and will soon be filed. Tariffs under two of the orders are delayed by complaints pending before the Interstate Commerce Commission relative to rates upon interstate shipments of the commodities covered. When these complaints are disposed of, if the action of the federal commission permits, it is the intention to file tariffs in conformity with the schedules contained in the order. As to coal, coke and moulding sand, tariffs are now being worked out in accordance with the schedules contained in the orders and will ultimately be filed. The last order, not covered by tariffs filed, relates to weighing charges, and the changes contemplated by the order can not well be put into force unless they are accepted by the so-called coal-carrying roads. The matter is now in course of adjustment between the roads affected.

It is stated that the preparation of tariffs for the entire Boston & Maine system covering coal shipments, which shall be in harmony with the schedules applicable to New Hampshire traffic prepared by this commission, and shall not adversely affect the revenue of the railroad, has been attended with many difficulties. The filing of the new tariffs has been so greatly delayed that this commission has insisted that the commission rate of 85 cents per ton on coal shipped from Portsmouth to Nashua be put into effect without awaiting the filing of complete coal tariffs, the old rate of \$1.00 per ton being considered clearly excessive and discriminatory, as compared with other existing rates. The new rate was, accordingly, filed September 12, 1914, becoming effective October 12, 1914. Should the filing of the proposed new coal tariffs be unreasonably delayed, like action of the commission may be taken as to other discriminatory or unreasonable intrastate coal rates, which were intended to be eliminated by the schedule contained in Order No. 278.

The Boston & Maine did not, however, prior to October 1, 1914, file the "request and agreement" provided for by said chapter 106 of the Laws of 1913, which was designed to enable this commission to make a valid order substituting the schedules prepared by it for the maximum rates supposed to be fixed by the consolidation statutes.

The reason why this was not done is stated in a letter from the president of the Boston & Maine Railroad, of which the following is a copy:

"September 23, 1914.

"To the Public Service Commission,
of the State of New Hampshire,
Concord, New Hampshire:

DEAR SIRS—

The Legislature of the State of New Hampshire at its last session passed a law, (Chapter 106, Laws of 1913), authorizing your Honorable Commission to establish "rational, fair and scientific" schedules of rates. Schedules of freight rates have been prepared by the commission, and are now in force.

The results, however, have not been as satisfactory as the commission, the railroad or the public would wish, and the Boston & Maine Railroad finds itself, for the year ending June 30, 1914, not earning its fixed charges within \$2,000,000.

"The act referred to, provided that the Railroad should, prior to October 1, 1914, have the option of accepting the schedules thus prepared, and agreeing not to raise any single rate, state or interstate, without the consent of the Legislature; or of adopting the rates prescribed by the Laws of 1883 and 1889.

"Since the passage of the Law of 1913, the Supreme Court of New Hampshire has decided that the restrictive statutes of 1883 and 1889 do not apply to interstate rates, and also that those statutes do not prevent the increase in individual rates, provided there is no general increase in rates. Investigation shows that, although the present schedules as promulgated by the commission show some increases, the total revenue collected on an equivalent amount of traffic is materially less than would have been collected had the rates of 1883 and 1889 been applied.

"To agree, therefore, not to raise any rate, state or interstate, would invite conflict with the Federal authorities, take from your Honorable Commission the power to adjust rates as business conditions might require, and, because of the delay necessarily incident to legislative action, seriously handicap the railroad in endeavoring to adjust its revenue to meet the demands of the public for efficient service. For these reasons the Boston & Maine Railroad respectfully notifies your Honorable Commission that it is unable to accept the stipulation provided for in the statute to which reference has been made.

"The Boston & Maine Railroad desires to take this occasion to express to your honorable body and to the people of New Hampshire its appreciation of the friendly coöperation which has been shown, not only by the Legislative and Executive branches of government, but also by the press and the business organizations of the State.

Yours truly,

J. H. HUSTIS,
President."

The decisions of the supreme court referred to in this letter were those handed down in the Clough case, which has been before mentioned. That case, after the partial decision which has been set forth, was long held under consideration by the court, and finally, at the January, 1914, session re-argument was invited. The case was finally decided April 13, 1914, by a divided court. Three opinions were filed, one by the chief justice, concurred in by Young, J.; one by Walker, J., concurring with the chief justice; and one by Peaslee, J., concurred in by Plummer, J. The opinions of the majority sustained the contention of the railroad that the limitation contained in the consolidation statutes was general and not specific in its application. The statement, contained in the opinion in the earlier case, above referred to (15 N. H. 327), that "It appears that it was intended to limit the power to increase rates on all roads leased or united under the act to the maximums stated in the schedules referred to in section 17" is considered an inadvertence, and it is pointed out that the statement can not fairly be interpreted as an intentional decision of the question, because the case was then pending before the court upon a demurrer to a bill in which it was alleged that the defendant had raised the rates "upon all commodities transported." The conclusion reached by the majority was stated as follows:

"Upon all the evidence competent for consideration, it seems more probable that the legislature did not intend to make the existing schedules in detail the maximum, but laid down as the measure of reasonableness the gross sum then received for the amount of traffic carried—the average charge per ton per mile. If the defendants can show that from each of the roads over which the plaintiffs' lumber has been transported they have not increased the average charge per ton per mile, they are not guilty of a violation of the statute. The evidence offered is competent. Further offer of proof is made as to decrease in fares. Such evidence is also competent. The expression "fares and freights" is

naturally collective. It might not require much evidence to sustain the conclusion that "and" meant "or"; but the sole basis of reasonable rates recognized in the statutes is the tolls from fares and freights together—the net receipts from transportation. There is nothing in the act upon which to differentiate the two sources of revenue. Section 11, chapter 128, Laws of 1844, is based on "net receipts," and section 13 provides for the regulation of "the rates of toll for freight of passengers and merchandise."

This quotation does not state the argument of the majority, which is carefully reasoned at such length as to make its inclusion here impracticable, but merely the conclusion.

The minority opinion contains a vigorous dissent from the conclusion of the majority, which can be well summarized by the following excerpts:

"The statutes of this state provide that on railroads leased or united by virtue thereof, the rates for fares and freights shall not be increased. * * * The first defence involves the meaning of this provision. It is claimed that the statute does not prohibit the increase of some rates, provided that in the readjustment other rates are reduced to such an extent that there is no increase in the aggregate. I dissent from the decision that this claim is sound. * * *

"The acts of which the language under consideration forms a part marked a new departure in railroad legislation in this state. The earlier policy of protection to the public by competition was abandoned. This result was not brought about until the subject had been thoroughly discussed. There was widespread opposition to the change, and the argument that with competition eliminated there would be added danger of unfair treatment of the public was constantly urged. It was to provide against this danger that the prohibition was enacted. Much of that discussion has been preserved and is to be found in the state library. The three volumes entitled "Railroad Controversy" give some idea of what the people were at that time consider-

ing. An examination of this and other collections shows that the thought of the people was frequently directed to specific rates. Counsel who argued before committees of the legislature furnished printed tables showing in detail rates from one point to another. As one witness testified, these tables were prepared so that the individual could see just what the rates from his own town would be under the new law. In the cross-examination of a witness before a committee of the house in 1887, counsel for the Concord Railroad asked: 'There is a rate from Manchester to Laconia today?' Being answered affirmatively, he further inquired: 'If the law provides that that rate shall not be increased, you will not be injured, will you?' One will search in vain for any suggestion in all that prolonged discussion that any rate was to be raised as a part of a larger readjustment of rates. In the report of the railroad commissioners to the legislature of 1889 (pp. 13, 14), it was stated in terms that the rates on some of the weaker roads were below what would yield any fair return upon the capital invested if they were operated independently; that the stronger roads were willing to agree to keep them there in return for the advantages of consolidation; and it was urged that such offers ought to be accepted by the state.

"In view of these facts, it seems highly probable that the legislature in speaking of rates for fares and freights had in mind the specific rates then in force. These rates were definite boundaries. They provided an easily ascertained limit to the power of the railroads. * * *

"The great point in mind was that the state proposed to retain the fullest control of the situation. It intended to have a control which was of practical value, as distinguished from a merely theoretical one. It intended also to reserve to each individual shipper a real weapon of defence against an increase of rates—of his rates, if one chooses to put it that way. This was the consideration given by the roads for the privilege of consolidation. The rates then discussed were the definite individual sums for individual pieces of service. This is what

the railroad commission talked about in its report of 1889, urging the state to close a bargain whereby the rates on the weaker roads would be fixed. There was no suggestion then that this fixing of rates was to be made inefficient by a process of dilution. There was no hint that these rates were to be averaged with all the rates of all the system (no matter how great the system should become) before there could be any determination of how the facts were as to an increase. Rates were thought of and talked about as units.

“And this is the fair, sensible, non-technical meaning of the language used. To the mind of the average New Hampshire legislator the term “the rates for fares and freights” means the table of prices charged by the road. It is believed that no one thought the statute meant anything else until within a very few years. As late as 1909 it was said, in an opinion in which all the justices concurred: ‘It appears that it was intended to limit the power to increase rates on roads leased or united under the act to the maximums stated in the schedules referred to in section 17.’ *State v. Railroad*, 75 N. H. 327, 331.”

This decision relieved the railroad from the necessity of accepting the schedules which had been prepared under the 1913 act. Not having been accepted by the railroad, and established by order of the commission, as provided in the act, they became and are of no legal effect whatever. The railroad is under no compulsion to put them into effect, or, if it does put them into effect, to keep them in effect longer than it chooses to do so.

The increases in rates above the level at which those same rates stood in 1883 and 1889, heretofore believed to be unlawful, are now held lawful, provided the gross sum for all traffic received is not increased. Accordingly, the railroad may initiate such changes in rates as it will, subject only to control by the state or federal commission if said rates are unreasonable in a legal sense. This having been declared to be the law by a majority of the court, it was not to be ex-

pected that the railroad would accept the schedules prepared, and ask for an order which would prevent it thereafter from raising any single rate in any of those schedules without legislative assent.

By this last decision the statutes, as restrictive measures, might at first glance appear to be left in a somewhat debilitated or "diluted" condition, to borrow a word from the minority opinion. That their enforcement, under the interpretation given, would be so difficult that only the resources of the state would be sufficient for the purpose, appears to have been recognized by the majority of the court, for in their opinion they said:

"It might be urged that this construction gives little protection to the individual shipper. No one feeling that an unlawful toll had been collected of him would be prepared to litigate with a railroad the question of its entire receipts in 1883 and at the time complained of. But the legislature did not give in terms the right of recovery for a violation of the statute by the railroad. If the shipper has such a remedy, it stands upon other grounds than a statute creating it. That no such remedy was specifically given tends to show it was not understood a situation had been created in which such a remedy would be useful."

Indeed if the decision of the court means that no violation of the act can be shown except by affirmative proof that, upon a particular road in the Boston & Maine system, the total amount collected in revenue upon passenger and freight traffic moved is more than would be collected upon the same traffic under the rates applicable thereto in 1883 or 1889, the enforcement of the statute must be attended with such difficulties as to be impossible not only for individuals, but for the state itself, regardless of the amount of money which it might be willing to expend for that purpose.

How could such excess collections be shown affirmatively? Only by evidence of the kind and volume of traffic moved on the particular line at the time of the inquiry, the points be-

tween which moved, and the rates applied thereon at the time of the inquiry and at the time of the passage of the statute under which the line was consolidated with other parts of the Boston & Maine system.

The rates applicable to much of the traffic on the various lines in 1883 and 1889 were known at the time the statutes were passed, and can be shown at the present time from tariffs of that date still in existence; but as to a great volume of traffic now moving under commodity schedules the rates at which the traffic moved before consolidation can not be shown. To use the language of the majority opinion, "Each road was (then) a law unto itself as far as its charges for fares and freights were concerned. * * * There was more than a suspicion of discrimination for the benefit of favored shippers." As a matter of fact it has been disclosed in the investigation made by this commission that secret rates were common, and that many rates probably not secret, formerly in force, are not now discoverable.

No records were kept by any road in 1883 or 1889, or are now kept, showing the volume of passenger traffic between respective points on the road.

There is now no record kept showing the volume of either freight or passenger traffic upon the various roads which compose the Boston & Maine system, or the earnings of such lines. The purpose of passing the statute was to consolidate the roads. It was known that records showing in detail the traffic and earnings of each constituent road would not be kept. No such great and useless expense as their keeping would require can for a moment have been contemplated by anybody. In the investigation made by this commission under chapter 196 of the Laws of 1911, the commission desired, if possible, to learn the earning capacity of the various leased lines, for the purpose of determining the fairness of the rentals paid, but, after investigation, became convinced that information as to the volume of traffic moved upon each line, and the amount of charges collected thereon, could only be obtained by an accounting expense so great as

to be unwarranted, even for a brief period and for the important purposes of that investigation.

That the railroad is collecting more revenue now from its total traffic on any line than would have been collected under the rates of 1883 or 1889 can accordingly not now be affirmatively proved by any evidence in existence. It may then perhaps be claimed that the rate limitation in the consolidation statutes is of no value, and might now well be repealed. If the common understanding of the effect of the last decisions of the court is correct such would be the fact. - But, before relegating this limitation to the limbo of forgotten things, the exact point before the court, and the exact matter decided, should be carefully considered, because to that extent only can the decision be conclusive. Declarations in the opinion not necessary to the decision of the question before the court are *dicta* merely, and may later appear to have been inadvertently made.

In the Clough case the plaintiffs had sought to recover amounts paid on lumber shipments in excess of the amounts which would have been collected on the same shipments under the rates in force in 1883 and 1889. The defendants had offered to prove that on other traffic, upon each line over which the plaintiffs' shipments moved, reductions had been made in rates (1) as to freights and (2) as to passenger rates, and that upon the whole traffic upon each said road the rates were not increased but much reduced in the aggregate. The plaintiffs had moved to reject evidence of these facts, and the sole question before the court, on this branch of the case, was whether the evidence was competent, or should be rejected. The court held that the facts offered to be proved would be a defence to the action, and that evidence thereof was competent. *This is all that was decided on this branch of the Clough case.*

What would be the rights of the parties in an action by the state to restrain particular rate increases upon a road covered by the limitation of the statutes, when the increases complained of were shown, but the whole volume of traffic.

freight and passenger, moving between points on that road, and the rates applicable to the whole traffic now and in 1889, were not shown, has not yet been judicially determined.

It may well be that when such a case is presented to the court, if occasion therefor shall ever arise, the court will say that, particular increases having been shown, the burden rests upon the railroad to furnish satisfactory evidence as to the whole volume of traffic moved upon the road in question, and as to the rates under which such traffic would have moved when the statute applicable was passed, and as to all other facts necessary to the satisfactory proof of the proposition that rates generally have not been increased since the earlier date. And it must be expected that in such a case some rule would be announced which would prevent commodity rates, upon traffic which never could have moved under class rates at any time, from being compared with the class rates of 1883 and 1889.

Indeed the very language of the majority opinion seems chosen with intent to indicate that the burden of justifying increases must rest upon the railroad as an affirmative defence.

"If the defendants can show that from each of the roads over which the plaintiffs' lumber has been transported they have not increased the average charge per ton per mile, they are not guilty of a violation of the statute."

The reference to "the average charge per ton per mile" as the determinative factor in the problem was not necessary to the point decided in the case, and will, doubtless, if occasion arises, be later considered by the court as inadvertent.

The reason it must be so considered is, that the average charge per ton per mile on any railroad fluctuates, absolutely regardless of changes in rates, with the fluctuation in the tonnage movement of high or low class freight. If at a given point a new factory is established, manufacturing valuable commodities taking a high rate, the average charge per ton per mile on the whole traffic moving from that point may

immediately rise, though no new rate is made or old rate advanced. In the same way, if a granite quarry is opened at that point, and large quantities of granite are shipped at a low ton rate, the average charge per ton per mile on the whole traffic from that point will make a violent descent, though no rate has been changed. The volume of low and high class tonnage is constantly fluctuating, and with it the average charge per ton per mile collected.

The suggestions which we make on this point may be proved beyond occasion for discussion by reference to the fluctuating charge per ton per mile collected from year to year on the Boston & Maine Railroad since 1900, which appears from the following table:

AVERAGE CHARGE PER TON PER MILE ON THE BOSTON & MAINE RAILROAD FROM 1900 TO 1914, BOTH YEARS INCLUSIVE.

1900	\$0.01439	1908	\$0.01045
1901	0.01134	1909	0.01083
1902	0.01119	1910	0.01085
1903	0.01131	1911	0.01095
1904	0.01178	1912	0.01089
1905	0.01152	1913	0.01054
1906	0.01162	1914	0.01057
1907	0.01082		

The increases in class and commodity rates on the Boston & Maine Railroad in 1903, of which complaint was made in New Hampshire, were put into effect in all states where that railroad operates. They were made to increase revenue, and were not accompanied by reductions in other rates. Since then no changes in class rates have been made, and no changes in commodity rates in general, until the increases of the last year in both class and commodity rates, which, to some extent, should be reflected in the figures for 1914. Yet the average charge per ton per mile was higher in 1900, before the increases of 1903, than it has been in any year since that date, and 36.15 per cent

higher than in 1914, when further substantial increases in both class and commodity rates were made.

The majority opinion of the court itself contains a warning against a misapplication of the decision in the following words:

“It may be remarked that in no instance has the controversy over railroad rates been submitted for judicial decision. Certain questions presented by what both parties have agreed, or what one party has alleged to be the facts, have been presented and decided; but a settlement of the law upon a judicial determination of the facts has not been and is not yet invoked by either party. An attempt to apply a decision based upon supposed or agreed facts to the actual facts may sometimes produce a wrong impression as to what was decided.”

To summarize the present situation, it may be said that the court in the cases which have been before it, has decided

(1) That the limitations in the consolidation statutes apply to practically the entire Boston & Maine system.

(2) That they apply to all rates, both interstate and intrastate, and may be enforced by proceedings in equity on behalf of the state. (It is, however, implied, and doubtless is the law, that, as to interstate rates, these limitations must give way, so far as necessary to avoid conflict with the exercise of the rate making power of the federal government.)

(3) That a shipper cannot recover payments on interstate shipments in excess of rates in force in 1883 or 1889 if the rates collected were assessed in accordance with tariffs duly filed and in effect under the provisions of the federal law.

(4) That the limitation is general in its application, so that increases in particular rates may be justified by proof that upon the traffic taken as a whole on the road in question no increase has been made.

We are not prepared to express the opinion that the rate limitation contained in these statutes has been rendered ineffective and valueless by the decision of the court upon the

point last mentioned. The opinions both of majority and minority recognize that the legislature inserted the limitation with an important purpose in view. "There is probably no jurisdiction in which a legislative purpose is carried into effect by a more liberal mode of construction than that which prevails in this state." If occasion should arise to apply these statutes by a judicial determination of the facts, it cannot be doubted that they may be so applied as to give to the state the protection which they were intended to secure. And this may come through the final adoption of the view now held by the minority of the court, or through the supplementing of the decisions already made by rules, declared applicable in proceedings under the statutes, which shall make it possible to carry out the purpose of the legislature as declared by the court.

From a public point of view the statutory limitation is more important by reason of the measure of control which it gives to the state over interstate rates than as a restriction upon increases in rates within the state. Intrastate rates may be controlled by state authority regardless of the statutory limitation; but that limitation, arising out of the contractual relation of the parties, gives to the state the only power which it has to restrain advances in interstate rates.

We have covered this matter fully in our report of November 30, 1912, and there is no occasion to repeat what we then said. Nothing that has occurred since that report was made has caused us to change our opinion then expressed, that the limitation contained in the consolidation statutes should not be repealed without the substitution of some equivalent limitation in its place.

At the present time there does not appear to be occasion for either legislation or litigation. Under legislative direction rate investigations extending over approximately three years have been made; complete maximum freight rate schedules have been prepared by this commission which the legislature intended should be accepted by the railroad as legal maximum schedules, and put into force and continued per-

manently, or until further legislative action. By reason of a changed understanding as to the legal rights of the Boston & Maine Railroad, that corporation has not filed the expected acceptance of the schedules intended to bind it hereafter to observe as a maximum every single rate in said schedules, but it has, for the purpose of measuring its present demands upon the shippers of the state, accepted those schedules (with the few exceptions noted) and put them into effect. In the case of those exceptions there appears to be no occasion to doubt that tariffs in substantial harmony with the schedules prepared will be put into force within the reasonably near future. And while the new rates are not made legal maximums, the failure of the expected acceptance on the part of the railroad leaves in force such limitation as is created by the consolidation statutes.

Under the latest decision of the court it appears that there is no violation of the statutory limitation merely by reason of the fact that certain rates now in force are higher than like rates in 1883 and 1889. This being so, and the state now having in effect upon all traffic on the Boston & Maine Railroad, both interstate and intrastate, rates in harmony with schedules prepared by this commission under legislative direction, there would seem to be no reason why the freight rate question, for the present at least, may not be regarded as settled.

We think it ought to be so regarded both by the state and by the railroad. While, under the present interpretation given to the consolidation statutes, the railroad may have the legal right to initiate an increase in any rate on its own motion, we think that it should not do so, beyond the limit fixed in the maximum schedules which we have prepared, except when it has shown such course to be justified to the satisfaction of the tribunal in this state having jurisdiction over rates. By such course further controversy between the state and the railroad over this vexed question of freight rates can be avoided; and no occasion may ever arise for a judicial application to the facts of the statutory limitation.

which has played so large a part in railroad questions in New Hampshire in the last decade.

PASSENGER RATES.

While some reference to passenger rates has necessarily been made above, it seems better to insert our recommendation with reference to such rates under a separate sub-heading, because the discussion thereof may be made brief, and may be considered without attention to much which has been said before.

As had before been stated, it appeared from the 1911 rate investigation that there had been, since the passage of the statutes of 1883 and 1889, a general and substantial reduction in passenger ticket rates. We found, however, that upon certain lines of the Boston & Maine, aside from lines constructed primarily for summer traffic, where tourist rates might be justified, single ticket rates were constructed upon a basis of 3½ cents and 4 cents per mile. These were the Concord & Montreal lines between Woodsville and Groveton and between Whitefield Junction and Berlin; the Lake Shore Railroad; the Manchester & North Weare Extension; and the New Boston Railroad. The aggregate mileage involved was 112 miles. The commission found the ticket rate then in force unjust and unreasonable, and on January 25, 1913, made an order fixing a maximum ticket rate upon all of said lines of 3 cents per mile. (3 N. H. P. S. C. Rep. 45.)

Tariffs were filed putting the reduced rate into effect, and are still in force. With this exception, no changes have been made in passenger rates in New Hampshire since this commission was established until the present year.

The question of passenger rates was considered by the conference of commissioners held in Boston, and the conference reached the conclusion that the Boston & Maine Railroad ought to be permitted additional revenue from its passenger traffic. It was found that there was a variation in rates on different parts of the system, rates upon

lines of regular travel varying from 2 cents to 3 cents per mile. It was also found that a great portion of passenger traffic moved on mileage tickets sold in 500-mile books at 2 cents per mile, and on other forms of tickets sold by wholesale at much below the regular ticket rates.

Concerning this matter the conference made the following statement:

“At the present time the local fare upon many parts of that system equals or exceeds $2\frac{1}{2}$ cents per mile. When a mileage book, good to bearer, is sold for 2 cents a mile, it inevitably results that speculators will put these mileage books on sale at something in excess of 2 cents and something less than the local fare. In point of fact, upon certain parts of the Boston & Maine system this kind of speculation in transportation is habitually and extensively conducted. This certainly is wrong. The passenger ought not to pay a profit to some middleman for his transportation, and rates of fare should be so adjusted that the inducement to this kind of speculation will not exist. If mileage books were sold at $2\frac{1}{4}$ cents instead of 2 cents per mile, and local fares were adjusted upon a minimum of $2\frac{1}{4}$ cents and a maximum of $2\frac{1}{2}$ cents, the relation between the mileage book and the local fare would be a more just one than at present exists. Many of the commissioners feel that there should be no difference between the mileage book and the local rate; that the local rate should be properly adjusted and the mileage book abolished. We are all of the opinion that these passenger fares require readjustment and that the statutes of those states which might interfere with a uniform treatment of this subject should be so modified that, if possible, some just rule applicable to all territory may be formulated.”

One of the statutes referred to by the conference in the foregoing statement was the New Hampshire mileage statute, chapter 107 of the laws of 1909, as amended by chapter 92 of the Laws of 1913, requiring all steam railroads to sell 500-mile mileage books at a rate of 2 cents per mile.

Following the conference of commissioners the Boston & Maine Railroad sought to carry out the recommendations made by the conference, and certain applications for minor changes in the New Hampshire passenger tariffs were allowed by this commission. (Informal Orders Nos. 244 and 302, 4 N. H. P. S. C. Rep. 622, 631.)

THE MILEAGE CASES.

BOSTON & MAINE AND GRAND TRUNK CASES.

On August 31, 1914, the Boston & Maine Railroad filed with the Interstate Commerce Commission, and with the commissions of Vermont and Massachusetts, and of this state, tariffs intended to put into effect on October 1, 1914, a mileage rate of $2\frac{1}{4}$ cents per mile. On September 1, 1914, the Grand Trunk Railway filed like tariffs. The proposed advance appearing to be clearly in conflict with the mileage statute before mentioned, a hearing was ordered by the commission as to the lawfulness of said rate, and was held on September 21, 1914. Both of the railroads involved claimed that the mileage statute was unconstitutional because in conflict with the state and federal constitutions. The Boston & Maine Railroad further stated, in effect, that it was its intention to carry out fully, so far as New Hampshire was concerned, the suggestions made by the conference of commissioners, and that a uniform ticket rate of $2\frac{1}{2}$ cents per mile was intended to be put into effect by December 1, 1914.

On September 22, 1914, this commission filed a report, in which it held that it could not permit any rate to be put into effect which was in excess of a rate fixed by statute. The question of constitutionality the commission held should be determined by the court, and not by the commission. Accordingly, an order was made forbidding the proposed increase solely upon the ground that it was in violation of law. (5 N. H. P. S. C. Rep. 21.)

Both the Boston & Maine Railroad and the Grand Trunk Railway immediately filed petitions with the United States District Court for the District of New Hampshire seeking

to enjoin the public service commission and the attorney-general of the state from enforcing the mileage statute, and the order of the commission based thereon. Hearing upon a motion for an interlocutory injunction was had, and on November 27, 1914, the court handed down an opinion to the effect that the petitioners should have prosecuted an appeal from the order of the commission to the state supreme court before applying to the federal court for injunction process.

An appeal from the order of the commission, taken by the Boston & Maine Railroad, was accordingly filed in the supreme court on November 30, 1914. Under the statute providing for speedy hearing in such cases this appeal will be in order for argument at the December, 1914, term.

MAINE CENTRAL CASE.

The supreme court now has under consideration a case involving the validity of the mileage statute. As originally passed in 1909 the act required the sale of 1000-mile books at the 2 cent rate. The 1913 amendment required that 500-mile books should be sold at the same rate.

The amendment took effect July 1, 1914. On that date the Maine Central Railway failed to put 500-mile books on sale, and indicated its intention not to comply with the statute. The commission accordingly requested the attorney-general to begin such legal proceedings as in his opinion would enforce obedience to the law. A petition for a writ of mandamus was accordingly filed in the superior court for the county of Coös. Under an agreement made between the attorney-general and counsel for the railroad, the 500-mile books were put on sale pending the determination of the validity of the statute.

No hearing upon the facts in this suit has yet been held, but the case has been transferred to the supreme court upon the defendant's demurrer, the defendant's contention being that any statute requiring the sale of mileage tickets at a less rate per mile than the regular ticket rate is in viola-

tion of the federal constitution and void. The case was argued and submitted at the November term, and a decision may be expected at any term hereafter.

If the court shall sustain the defendant's contention in the Maine Central case the decision will, of course, be decisive in the Boston & Maine and Grand Trunk cases as well. If it shall decide adversely to the defendant, upon the question raised by the demurrer, the defendant will still have the right to try out the question of fact involved, whether the rate is confiscatory and unconstitutional upon that ground.

GENERAL CONCLUSIONS AND RECOMMENDATIONS.

Our views with reference to this mileage statute were clearly set forth in the statement of the conference of commissioners, and in our report accompanying the order made in the Boston & Maine and Grand Trunk case. (5 N. H. P. S. C. Rep. 21.)

We are in full accord with what was said in the statement of the conference as to the readjustment which should be made in passenger rates. People who desire to travel upon railroads should be able to do so upon the payment of the fair value of the service performed by the railroad, and this regardless of whether they are able to purchase many tickets in advance, or must purchase single tickets as they wish to use the same from time to time.

Single trip tickets accordingly should not be sold at more than a fair rate. From this proposition there will be no dissent. If $2\frac{1}{2}$ cents is a fair amount to pay per mile for transportation, the single trip tickets should not be kept at 3 cents in order that passengers who can afford to buy at wholesale may buy at 2 cents.

On the other hand, if $2\frac{1}{2}$ cents is a fair rate, the railroad ought not to be obliged to sell tickets by wholesale for 2 cents. If something is saved to the railroad in the expense of sales and accounting by selling tickets in the form of mileages, whereby the number of sales is largely reduced,

and if the use of money paid for tickets bought in advance is of value to the railroad, these advantages are not sufficient to justify the state in requiring that a reduction to the wholesale purchaser of 20 per cent in the purchase price shall be made, and this is what a 2 cent mileage rate means when the ticket rate is upon a basis of $2\frac{1}{2}$ cents.

That a reduction of 10 per cent to the wholesale purchaser is all that can be justified upon the ground of the advantages incident to the railroad arising from sales in advance and at wholesale seems certain. Indeed it is probable that an investigation would show that even this variation is in excess of the value of any such advantages.

The conference of commissioners reached the conclusion that the Boston & Maine Railroad should be permitted an increase in revenue equitably apportioned upon the passenger and freight traffic of the railroad. All of the facts that have come to our knowledge since that conference was closed have but confirmed the conclusion in which we then joined.

If the railroad is to receive an increased revenue, those who use the railroad must pay more for the service which they receive. The conference aimed to suggest such a readjustment of passenger rates as should remove or minimize discriminations which were found to exist. Speaking broadly it may be said that the conference found that passengers traveling on single trip tickets were generally paying all that such service was fairly worth, but that passengers traveling on tickets purchased at wholesale were upon a large portion of the road enjoying reductions varying from 20 per cent to 33 1-3 per cent. In view of these facts it appeared to be clear that any increase in passenger rates ought to be placed upon tickets sold at wholesale.

New Hampshire has no occasion to find fault with the result of the plan adopted by the conference. There are 1,004 miles of railroad in this state, included in the Boston & Maine system, outside of the strictly summer lines. The rates now in force thereon are as follows: upon 42 miles,

2 cents; upon 200 miles, $2\frac{1}{2}$ cents; upon 89 miles, $2\frac{3}{4}$ cents; upon 673 miles, 3 cents. If the proposed change becomes effective, ticket rates in this state will be advanced upon 42 miles, left stationary upon 200 miles, and reduced upon 762 miles. While this advance is upon the line of most congested traffic, so far as persons traveling intrastate upon tickets are concerned, it is undoubtedly more than offset by the decrease upon the great part of the remainder of the system, and so far as persons so traveling interstate are concerned it must be in large part so offset.

Tariffs putting this $2\frac{1}{2}$ cent ticket rate into effect upon all of the mileage mentioned above have been filed with the commission, effective January 1, 1915.

It was the expectation of this commission that the Boston & Maine would delay any attempt to put the advanced mileage rate into effect until the legislature could be asked to repeal the mileage statute, and we believe it might wisely have followed that course. New Hampshire may be trusted to deal justly with its citizens and with all who do business within its borders, and if conditions make it just that the mileage rate prescribed by statute in 1909 shall be increased, we have not doubted that the legislature would give its assent.

The statute applies, as appears from what we have already said, to the Maine Central and Grand Trunk Railroads, as well as to the Boston & Maine. Both of these railroads are contesting its enforcement.

If it should become necessary to defend the act against the charge that it is confiscatory, we have grave doubts whether a successful defense, so far at least as the Maine Central Railroad is concerned, could be made. This is partly because the railroad runs through the heart of the White Mountains, where cost of construction was high, but traffic, both passenger and freight, is light; and it is partly because, by reason of the character of the territory served, operating costs are extremely large in proportion to the volume of traffic moved.

In the rate investigation of 1911, we caused every railroad in the state to allocate its earnings and disbursements, attributable to traffic movements within the state of New Hampshire, according to rules prepared by the rate expert then in the employ of the commission. This allocation of receipts and disbursements, in the case of the Maine Central, was continued until July 1, 1913. It appears therefrom that in the year ending on that date the New Hampshire business of the Maine Central resulted in a net deficit of \$140,615.57, without any return whatever upon invested capital.

Upon the Grand Trunk, returns under the allocation order were not made after March 31, 1913. The result of New Hampshire operations was a net profit of \$38,285.85.

The Maine Central has a New Hampshire mileage of 100 miles; and the Grand Trunk a mileage of 52 miles. The New Hampshire properties of the Maine Central are assessed for purposes of taxation at \$2,400,000, and those of the Grand Trunk at \$2,100,000. It may safely be said that any increase which either of these railroads may receive by reason of the proposed increase in mileage rates will fall far short of giving it an excessive return.

When the $2\frac{1}{4}$ cent mileage tariffs were filed with this commission the Grand Trunk, as well as the Boston & Maine, coincidentally filed like tariffs with the Interstate Commerce Commission, and with the commissions of other states where they were by law required to file tariffs. All of these tariffs have taken effect except those filed with this commission.

The New York, New Haven & Hartford Railroad and the Boston & Albany Railroad have likewise put into effect a mileage rate of $2\frac{1}{4}$ cents upon all of their lines, applicable alike to interstate and intrastate business.

At the present time, therefore, the $2\frac{1}{4}$ cent mileage rate is in force upon intrastate traffic on the Grand Trunk, Boston & Maine, Boston & Albany, and New York, New Haven & Hartford railroads in all of the states in which those rail-

roads operate, except New Hampshire, and is in effect upon interstate traffic in all of those states, including New Hampshire.

We are satisfied that there is no reason which justifies a lower mileage rate upon intrastate traffic than upon interstate traffic. And we are further satisfied, as appears from what we have already said, that a rate of $2\frac{1}{4}$ cents per mile is not excessive, but is no more than the fair value of the service rendered, in view of present day operating costs which the railroad must meet. We accordingly recommend that chapter 107 of the Laws of 1909, as amended by chapter 92 of the Laws of 1913, be repealed.

STREET RAILWAY RATES.

INCREASE ON EXETER, HAMPTON & AMESBURY STREET RAILWAY.

No material change in fares upon the street railroads of the state, with the exception hereafter noted, has occurred since this commission was established, except upon the Exeter, Hampton & Amesbury Street Railway. Prior to December 1, 1914, rates upon that road were upon a basis of 6 cents for single fares, but books of 50 and 100 tickets, and summer excursion tickets in strips of eights were sold on a basis of five cents, and pupils' tickets at 50 per cent of the rate for single fares. On October 20, 1914, tariffs were filed, effective December 1, 1914, withdrawing all reduced rate tickets and placing fares for all persons except pupils upon a flat 6 cent basis. Pupils tickets were left unchanged. The advance is accounted for by reason of diminished net earnings, which heretofore were barely sufficient to pay fixed charges, and in the year ending June 30, 1914, were insufficient even for that purpose, the operations for the year resulting in a deficit of \$3,148.42 after the payment of fixed charges.

MANCHESTER STREET RAILWAY RATE INVESTIGATION.

Upon the Manchester Street Railway the investigation ordered by chapter 120 of the Laws of 1913, has been completed by this commission. A careful investigation of the financial history of the corporation disclosed that the stockholders have paid into that corporation and invested in the property in round figures \$1,400,000; while a physical valuation of the road and equipment showed that the same would cost to reproduce approximately \$1,600,000.

The stockholders in the past have received barely a fair return upon their investment, and the present earnings of the road, after making proper provision against accruing depreciation, are but little more than six per cent upon the amount invested by the stockholders, which the commission finds to be the fair value of the property.

A reduction in fares to school children, to the basis contemplated by the act, was ordered, and has been put into effect; but any reduction to the general public the commission found could not be made without depriving the stockholders of a fair return upon the property which they had devoted to the public service.

EXPRESS RATES.

The last year appears to have brought a settlement of the long pending express controversy, so far as present and future rates are concerned.

In 1906 and 1907 the American Express Company made substantial increases in its rates in New Hampshire. This action was followed by the enactment of a statute giving the railroad commission jurisdiction to fix the rates of express companies, subject to a right of appeal to the superior court.

In the summer of 1908 the state board of trade and other parties filed with the railroad commission complaints against the rates of the American Express Company. After an extended hearing an order was made by the railroad commission on May 11, 1909, reducing the rates complained of.

- The express company, however, availed itself of the right of appeal to the superior court, and thereby suspended the effect of the commission's order pending the termination of the appeal.

In the superior court the case was continued from term to term, awaiting hearing, until May, 1912, when it was heard by Chief Justice Wallace, but before decision was rendered the chief justice was stricken with the illness which persisted until his death. The case still awaits another hearing.

On January 3, 1914, the express companies doing business in the state filed with this commission tariffs intending to put into effect, as to intrastate express traffic in New Hampshire, a system of block rates similar to the system ordered into effect as to interstate traffic by the Interstate Commerce Commission. Believing that these rates, while so constructed as to effect a substantial reduction on interstate traffic, would operate actually to advance the intrastate rates which had been ordered reduced by the railroad commission, we suspended the operation of the proposed tariffs and ordered a broad investigation of all existing express rates in New Hampshire. In this investigation the state was represented by the attorney-general and by Sherman E. Burroughs, Esq., who had conducted the hearing for the complainants before the rail road commission, and upon appeal in the superior court.

The investigation was ordered on January 15, 1914, and on July 28, 1914, the commission filed a report and order in which it found the rates proposed to be put into effect unjust and unreasonable, and prescribed in place thereof a complete system of rates stated according to the block system for all express companies doing business in New Hampshire, the same to take effect September 1, 1914. (4 N. H. P. S. C. Rep. 519.)

The effect of this order was to restore the 15 and 20 cent rates on small packages, withdrawn in 1906 and 1907, to reduce the total amount collected on intrastate business local to the lines of the American Express Company by

approximately ten per cent, and to abolish double charges upon packages handled by more than one company, the new rates ordered being based upon the number of blocks or sub-blocks through which the shipment moves, regardless of whether handled by one or more companies.

While a motion for rehearing in this case, preparatory to an appeal, was made, and also a motion to postpone the effective date of the new rates until October 1, 1914, on the ground that schedules for the use of agents could not be prepared in season to put the rates into effect on September 1, 1914, upon the denial of both motions (4 N. H. P. S. C. Rep. 606) the rates were put into effect on the date ordered, and no appeal from the order of the commission has been taken.

This case illustrates the advantage of an appeal from this commission directly to the supreme court, such as was provided by the 1913 legislature, as compared with an appeal to the superior court with a right to retrial before the court. The present method offers little encouragement to appeals designed only for delay; the former may postpone the enforcement of orders of the commission, pending the termination of litigation so prolonged that the public may well forget that orders have been made.

RAILROAD INSPECTION.

John W. Storrs, who had had large experience in railroad and bridge construction, was appointed chief engineer of the commission soon after it was organized. From the beginning he has given much attention to the inspection of cars, stations, bridges, crossings and other matters. Some of the bridges inspected were reported as unsafe for travel, and all such were repaired, strengthened or replaced by new bridges without delay. All steam railroads and electric railways were required to file complete plans of all their bridges, including highway bridges over which electric railways run. These plans are being figured in detail to determine the

strength of the bridges and their ability to support the strain to which they are subjected.

From the results of the early inspections and reports, it was deemed necessary to make a thorough inspection of all the railroads of the state. The legislature of 1913 made a sufficient appropriation for this purpose, with the understanding that this work would be done. In July, 1913, Charles C. Battey, who was thoroughly familiar with railroad and bridge work was appointed assistant engineer in the railroad division. He at once entered upon a detailed inspection of all the railroads of the state, which he has just completed. He has travelled on foot over the 1,172.9 miles of track of the Boston & Maine, Maine Central and Grand Trunk railroads in New Hampshire, has examined the condition of the road bed, ties, rails, connections, signals, guards, etc., and has given careful attention to each one of the 697 bridges having ten feet or more clear span, including their abutments. He has inspected each of the 1,255 grade crossings, overhead bridges and underpasses, and each of the 374 depots or stations. He has filed a report in detail of his entire work. Eight bridges were reported as unsafe or requiring attention. All unsatisfactory conditions were at once taken up with officials or employees of the railroad, and all suggestions and recommendations made have been cheerfully complied with, and a spirit of coöperation has prevailed throughout. Railroad conditions in New Hampshire are certainly better on account of this detailed inspection. Charts of all the steam railroads in the state showing kind, size and weight of rail, quality of ballast, grades, and other conditions are on file in the office of the commission, as is also a card index of all the railroad stations or depots containing plan, location, and condition at dates of inspection. Reports of the conditions at all the grade crossings are also on file. There has been no systematic scheme of car inspection, but it is the practice of our engineering department to note car and train conditions when travelling, and in this way a large number of cars have been observed through-

out the state and reports made. Whenever there has been occasion, the attention of the company has been called to cars not considered suitable, with the result that the cars have been replaced or renovated. All locomotives running in this state are provided with spark arresters, which are inspected by railroad employees as often as once each week.

The general condition of all of the railroads in the state, using the scale poor, fair, good and excellent, would be expressed as fair to good, for both road and equipment.

GRADE CROSSINGS.

Prior to the 1913 session of the legislature, protection of grade crossings could be ordered only by vote of a town in town meeting, from which vote the railroad concerned had a right of appeal to the commission. At that session, on our recommendation, an act was passed giving the commission authority, on petition or on its own motion, after hearing, to order any crossing protected by gates, flagmen, automatic gong, or otherwise, and also to order land adjoining any crossing to be cleared and kept clear of buildings, trees, brush or other obstructions.

Acting under authority of this statute, the commission has during the past two years personally visited every grade crossing in the state, in company with its chief engineer and representatives of the railroad. The practice has been to travel on a special train, stopping at each crossing, getting out and walking up the highway in each direction far enough to get a clear idea of the manner in which the view of the crossing could be improved, and dictating on the spot to a stenographer a memorandum of the work to be done.

The general practice, where the configuration of the land made such a course practicable, has been, on highways much travelled by automobiles, to order trees, brush and other obstructions to the view removed so as to give a clear view of the track for a distance of five hundred feet in both feet from the crossing, on each side. On less travelled roads, less clearing has been required, the minimum being

sufficient to give a view of the track three hundred feet each way from a point in the highway one hundred feet from the crossing. In a few cases, banks of earth have been cut down to give a better view, and at several crossings small buildings have been moved or destroyed. In other cases, especially in villages and near stations, banks of earth or buildings so obstruct the view that it can not be cleared without unreasonable expense. In some of these cases, flagmen have been placed on duty. In others, it has been found possible to arrange for flagging by station agents. In a considerable number of cases, automatic protection has been installed, consisting of an efficient gong, and a series of red lights, operating on the principle of a moving electric sign, and giving most efficient warning at night. And at a number of crossings near stations, a speed limit has been fixed for all passing trains, so low as to eliminate practically all liability to accident. This method of protection has been used with excellent results in such places as Whitefield, Lancaster, Groveton, West Stewartstown and North Stratford, and has recently been put in effect at Berlin and at a number of crossings on the Conway and Suncook Valley branches, and on other lines.

Altogether, there are in New Hampshire 1,031 grade crossings. Of these, before we began our investigation 68 were protected by gates, 90 by flagmen, and 46 by automatic gongs. Our work of inspection was only recently completed, and final orders have not in all cases been made. But in a general way it may be stated that of the 826 crossings unprotected when this investigation was begun, about 469 will be improved by the cutting of trees and brush and the removal of other obstructions to the view, 15 will be protected by flagmen, 30 will be equipped with automatic gongs and lights, and about 25 will be rendered practically safe by restrictions on the speed of trains.

The work is not to be regarded as completed. Conditions change, so that a crossing little used today may in a few years be very heavily travelled, and will require protection

not now necessary. And from year to year it will be possible in specific cases to make crossings safer by improvements so expensive that they could not reasonably be ordered all at one time, but the cost of which would not be excessive if spread over a series of years.

In view of the fact that we have in New Hampshire no statute requiring railroads to incur large expense in the elimination annually of a considerable number of grade crossings, as is the case in neighboring states, it seems not unreasonable to demand that they shall meet the comparatively insignificant cost of making existing grade crossings as safe for the public travel as is reasonably possible.

But changing conditions of travel on our public highways render the established methods of protection at grade crossings inadequate. When the ordinary rate of vehicles was from four to eight miles an hour, a sign at the crossing gave warning in adequate time to stop, look and listen for an approaching train, and, with the whistle blown and the bell ringing, collisions of trains with vehicles, at least in the day time, were generally avoidable. But now, when travel is largely in automobiles, moving at from twenty to fifty miles an hour, the crossing sign frequently does not come into sight in time to slacken speed and take the necessary precautions before crossing the track. In order that the warning of approach to a crossing may be adequate, it is necessary that that warning be given some time before the crossing is reached. And this involves placing signs beside the highway at a considerable distance from the crossing.

It does not seem reasonable to require the railroad to be responsible for the maintenance of signs off its right of way, and often so situated as not to be visible to its section men making their regular tours of inspection. We accordingly during the past summer sent circular letters to the selectmen or other proper officials of every city and town in the state, notifying them that we were prepared to secure for them warning signs of uniform pattern, stating the dis-

tance to the crossing, such signs to be placed in a conspicuous position beside the highway at a reasonable distance from the crossing, four hundred feet being recommended as a proper distance when practicable.

There are in the state 174 cities and towns containing grade crossings. Of these, 89, or slightly more than half, have adopted the recommendation of the commission, and have ordered 922 signs. Of those who have declined to use the signs, a few base their refusal on the fact that all or at least the most dangerous of their crossings are protected by signs erected by a firm of automobile tire manufacturers. These signs consist of a red circular disc, with white letters, containing words of warning, and also an advertisement of the company erecting them. There is so much lettering on the signs, and it is so arranged, as to be rather confusing than helpful, and the warning words are rendered inconspicuous by the advertising matter encircling them. These signs are also unfortunately located, in that they are at no uniform distance from the crossings, some being within fifty or sixty feet, while others are six hundred feet or more distant. And they are placed at comparatively few crossings in the state.

Our plan contemplates a sign of conspicuous design, containing in large letters the smallest possible number of words, so that its meaning can be grasped at a glance, and of uniform pattern and, as nearly as possible, uniform distance from the tracks, at every crossing in the state. This uniformity is essential to adequate protection. The driver of an automobile should know that he will not come upon any crossing of which he has not had warning, and should be able instantly to recognize the warning sign and appreciate its significance. To accomplish this end, the signs must be in universal use. To a driver accustomed to seeing the signs, a crossing without the sign would be a veritable trap, immeasurably more dangerous than if the signs were not in general use elsewhere. And it is of the utmost importance that the signs should be everywhere the same, and

at substantially the same distance from the track. In such a situation the mind, on sight of the sign, without conscious effort, receives precisely the impression that is intended to be conveyed. The cost of the signs is an insignificant item to any town,—they cost only fifty cents apiece, to which is to be added the expense of placing them in position.

In order that this protection, which our investigation of crossing accidents has convinced us will be of inestimable value, may be as complete and efficient as possible, we recommend the passage of an act imposing upon all cities and towns the duty of placing such signs on the highways near every grade crossing within their limits, except in cases in which the commission, after special investigation, shall decide that it is impracticable or unnecessary to do so.

We will present to the legislature a draft of a bill embodying our views on the subject.

ACCIDENTS.

Notice of each fatal accident is immediately given to the commission by telegraph or telephone, and a formal report is also made for our files. The chief engineer investigates each accident on the ground and reports all facts ascertained to the commission. In the case of derailments or collisions, the investigation is made at once in order to ascertain fully the conditions and so far as possible the cause of the accident. Collisions, derailments, grade crossing accidents, and accidents to passengers and to employees are also formally investigated at public hearings held by one or more of the commissioners. Accidents to trespassers are investigated by members of the commission when the circumstances reported by the chief engineer indicate that the railroad may have been at fault in the case. The object in the investigation of accidents is to determine whether they may be avoided by changing the rules of operation or the practices of employees, or otherwise.

Classified reports of all accidents are included in the annual reports of the companies and in the statistical reports of the commission.

PUBLIC UTILITIES.

Reports were received from all of the public utilities rendering service in the state for the year ending June 30, 1913, and after several months of work through our office all were arranged in proper form and were printed in volume III of our reports. The total number of active utilities reporting was two hundred and twenty-two. Of these, seventy furnished electricity; ten furnished gas; five, electricity and gas; one, electricity and water; sixty-seven, water; sixty-two, telephone service; four, telegraph service; and three were toll bridges. The number of water utilities was less than that in the previous report, as by chapter 145, section 1 (a), Laws of 1913, the furnishing of water to a less number of consumers than ten does not constitute a person a utility. About one year was required to secure the reports and get them into proper form and printed, for each of the years 1912 and 1913, and about the same time is liable to be required in bringing out the report for the year ending June 30, 1914; but it is expected that the adoption of the uniform system of accounts will eventually reduce the difficulty of getting the returns into satisfactory form.

STANDARDS OF SERVICE FOR UTILITIES.

Section 4, chapter 164, Laws of 1911, provides that "Every public utility shall furnish such service and facilities as shall be reasonably safe and adequate and in all respects just and reasonable." Chapter 124, Laws of 1913, gives the commission authority in detail to establish suitable and convenient standards of commercial units of service, product or commodity, standards of measurement of quality, pressure, initial voltage, etc., and reasonable rules, regulations, specifications and standards to secure accuracy of meters and appliances for measurement, also to provide for the inspection of the manner in which utilities conform to the regulations, and for the purchase of such apparatus as it may deem necessary to carry out the work of inspection. This act also authorizes

and directs the commission to fix and collect reasonable fees for examining and testing meters and other measuring apparatus and appliances, and the product of any utility offered to the public for use or consumption. The legislature also made a sufficient appropriation to provide for the inspection of the public utilities, and Stuart A. Nims, a graduate of Worcester Polytechnic Institute, who had given special attention to studies along the line of utility work, was appointed assistant engineer in the public utilities division.

It was found to be necessary to adopt standards to be used in determining the adequacy and reasonableness of all kinds of service.

Gas utilities were first considered by the commission. The gas then being produced by the different companies was tested for heating value, pressure and impurities, to determine the condition then existing. A tentative set of rules was prepared and a conference held, at which the various gas companies and the Bureau of Standards at Washington were represented. A set of rules was adopted, which was considered reasonably fair to both producers and consumers. The rules adopted prescribe standards of purity, pressure and heating value of gas, and provide for periodic testing thereof, and for the testing of meters, and otherwise regulate the service of gas utilities.

Frequent tests are required by the utilities, and the commission will inspect the methods of manufacture and test the quality of gas supplied and the accuracy of the meters from time to time as it shall judge expedient. Consumers are entitled to one free test of each meter annually on request to the utility, and may secure tests by the commission on application, the fee to be paid by the utility when the meter is found to be more than two per cent fast,—two per cent being the allowable meter error.

Order No. 252 containing these rules became effective February 1, 1914 (4 N. H. P. S. C. Rep. 115). Substantially the same procedure was followed for electric utilities, except that information of existing conditions was

obtained through a list of questions sent to each utility instead of by making a special preliminary inspection. A set of rules corresponding in scope to that for the gas utilities was agreed upon and issued as commission Order No. 314, effective July 1, 1914, ninety days being allowed as a reasonable time in which to procure the required testing equipment. (4 N. H. P. S. C. Rep. 328.)

Investigations are in progress to obtain sufficient information covering the various phases of service rendered by the telephone and water utilities to furnish a satisfactory basis for regulation, and rules will be issued as soon as the necessary data have been received.

UTILITY INSPECTION.

Inspections have been made of the service furnished by the different utilities where informal complaints have seemed sufficiently well grounded to warrant the same. In many instances utilities were not aware that their service was inadequate, and they have shown a willingness to coöperate and to make the changes recommended for the betterment of the service. Since the promulgation of the rules for the operation of gas utilities, from two to four inspections have been made of each of the ten large plants in the state. These, together with the monthly reports of the tests of heating value, purity and meters made by the utilities themselves, have enabled the commission to get a fairly adequate idea of the quality of the service rendered. In the inspection of the ten large gas utilities, the commission tested 101 meters, of which 17, or 16.8 per cent, were found to be fast and 15, or 14.85 per cent, slow. Of the 8,370 meter tests reported by the utilities 912, or 10.9 per cent, were reported fast, and 403, or 4.8 per cent, slow (meters are reported correct unless the error exceeds 2 per cent, which is the error allowed by the rules). In the case of two utilities, tests by the commission showed the average heating value to be 590 and 596, while the standard

is 600 British thermal units per cubic foot of gas. In two cases also the standards for purity were not reached. Further effort must be made by these utilities to conform to the standards established.

We have not the requisite apparatus for making the tests of electric services, and no routine service inspections have been made under the rules. Two electric meters have been tested at the request of the consumers,—one was found to be correct, and the other 100 per cent fast, and in the latter case, under the rules established by the commission, the refund amounted to \$300.00.

The inspection of water service has had to do largely with fire stream tests and the adequacy of the supply for fire protection. Some investigations are now being made for the purpose of securing sufficient information to enable us to establish reasonable service rules for water utilities. In the absence of complaint to this commission, it is assumed that the State Board of Health, which has particular jurisdiction, will make such inspection as to purity of water as may be necessary.

A few investigations of telephone service have been made upon informal complaints of subscribers, and the inspections made indicate that there is need of work along this line. The commission will undertake the establishment of standards for telephone service as soon as those for water service are completed.

CLASSIFICATION OF ACCOUNTS.

A proper system of accounting is essential to the successful conduct of any considerable business enterprise; and it is a matter of common experience that the improvements in accounting methods enforced by commissions in other states have worked great improvements in the financial condition of the utilities under their supervision.

The simple forms for the annual reports of each of the classes of utilities, adopted for the first year, were found,

after two years of trial, not to include sufficient details to furnish a basis for a satisfactory comparison of the larger companies, and to be somewhat more extended than was necessary for the smallest utilities. It became evident after the reports for the second year were filed that a uniform system of accounts and records must be adopted, in order that the necessary information might be furnished in the annual reports.

Section 6, chapter 164 of the Laws of 1911, amended by Section 1, chapter 98 of the Laws of 1913, authorized the commission to classify public utilities and prescribe a system of accounts for each class. The electrical companies were first considered. A tentative uniform classification and system of accounts for electric utilities was set up, and distributed among the utilities, asking for criticism or suggestions by correspondence and at conferences to be held later. Three conferences were held, at which all the larger companies and some others were represented. The National Electric Light Association was also represented, and careful comparison was made with the system under preparation by a committee of that association so as to avoid minor differences not essential to the receiving of the information deemed necessary for our records.

The classification adopted divides the utilities into four classes, as follows: Class A companies having average annual revenues exceeding \$50,000; Class B from \$20,000 to \$50,000; Class C from \$3,000 to \$20,000; Class D not exceeding \$3,000. A system of accounts is assigned to each class. Each schedule follows the same general principles, thus permitting of the comparison of operating results between plants of all classes.

Any company may use the next higher class, and subdivide accounts so far as is necessary to its operation. All the accounts are fully defined for Class A, and the accounts for Classes B and C are consolidated from Class A accounts. A complete text of instructions for Class D is given by itself, and it is believed that the smallest utilities will hereafter

find very little difficulty in furnishing information as called for by the commission. There was general agreement that the records were such as should be kept for the benefit of the companies themselves. The order establishing and prescribing this system was made effective July 1, 1914.

The gas companies were next considered. A corresponding classification of companies and system of accounts have been duly discussed with representatives of all the gas companies desiring to be heard, a general agreement has been reached, and the final revision is now being made. The preliminary work has been done and a first conference held with the water companies on a corresponding system of accounts, and the remaining utilities will be taken up in order as early as classifications can be prepared.

The adoption of uniform accounts can not fail to be helpful, as it provides in convenient form the information necessary for a comparative study of like companies, which, by making evident any lack of efficiency, will be an aid toward uniform excellence of operation.

An important feature of the system is the complete record of plant extensions, maintenance and extraordinary repairs, so that all changes in plant investment are readily available for valuation purposes, either in rate cases or for capitalization or transfer of property.

UTILITY RATES.

Outlines of the schedules of rates of all utilities in the state were published in volume II of our reports. The continuance of the railroad rate investigation, and the pressure of other investigations ordered by the legislature or arising upon petition or otherwise, has prevented any extended study of utility rates in general.

It is known, however, that many of the different rate schedules in force, by discount provisions, which give a constantly decreasing rate, according to the increased quantity of service taken, and which are not scientifically drawn, violate the fundamental principle of fairness, that the charge

for any quantity of service shall not exceed the charge for a larger quantity of service of the same kind. The actual discriminations arising from unscientific schedules of this character are not, however, very serious. The rates of electric utilities are most striking in variety of form and in range of prices charged for the same class of service by different companies. Schedules of utilities in general disclose many discriminatory features which ought to be easily eliminated by coöperation between the utilities and the commission. Such attention as our more imperative duties have permitted has been given to this matter, but much important work remains to be done.

MANCHESTER GAS RATE INVESTIGATION.

Upon the petition of the members of the last legislature from the city of Manchester, investigation of the rates of the Peoples Gas Light Company was made by the commission, the report and order therein being filed June 10, 1914. (4 N. H. P. S. C. Rep. 337.)

The finding of the commission was that the rate of \$1.10 per thousand feet, charged by the company for gas service, was unjust and unreasonable, and an order was made, effective July 1, 1914, reducing the rate to \$1.00 per thousand feet. This order was duly complied with, and the new rate is now in effect. Upon the total meter sales of gas shown by the last annual report of the company to the commission, the reduction ordered amounts to the annual sum of \$23,746.17.

SHORT TERM TELEPHONE RATES.

Complaints made to the commission during the current calendar year led the commission to doubt whether the New England Telephone & Telegraph Company and its subsidiaries in New Hampshire were making a full compliance with the requirements of chapter 141 of the Laws of 1909, fixing the rate for short term telephone service. Accordingly,

a comprehensive investigation involving all of the so-called New England lines in New Hampshire was ordered on July 3, 1914. This investigation has just been concluded, and our report filed November 30, 1914, discloses practices on the part of the companies which have in effect nullified the statute. These practices were defended by the companies as in accordance with a construction placed upon the statute by counsel for the companies.

The commission in its report has declared the interpretation to be placed upon the law, which it believes to be in accord with the clear purpose of the legislature, and has held to be unlawful the practices of the companies inconsistent therewith.

The past conduct of the New England companies with reference to complying with requirements of this commission has been such that we have every reason to believe that they will cheerfully comply with the terms of this act as now interpreted by the commission, without further procedure upon our part. They have been allowed until December 15, 1914, to consider the findings and rulings made by the commission, and to advise the commission whether they will accept the same and conform thereto. (5 N. H. P. S. C. Rep. 115.)

D A M S.

By chapter 47, Laws of 1913, the construction of dams of a height in excess of twenty-five feet is under the supervision of a state inspector to be designated by this commission and paid by the owner. A dam about thirty feet in height was built at North Weare in the summer of 1913. The watershed was investigated and also the proposed construction. The plans and specifications were passed upon, and an engineer was employed to observe this work, look after the laying of foundations, mixing of concrete, placing of materials, etc., throughout the whole course of the work. A dam twenty-five feet in height at Dixville Notch, which had been undertaken before the law was passed, was inspected, with some study of the conditions, character of the

material and the work, and some suggestions were made for its completion, which were adopted.

BOAT INSPECTION.

Previous to 1913 the inspection of steam and other power boats engaged in carrying passengers and freight for hire was in charge of inspectors appointed by the governor and council. Their services were compensated entirely by the fees collected from boat owners. The legislature of 1913 placed this inspection in the hands of this commission, enlarged the class of boats subject to inspection by including all power boats kept for hire, as well as those operated as common carriers, and laid upon us the duty of promulgating rules for the operation and equipment of all power boats, those privately owned and operated as well as those subject to inspection.

By unfortunate clerical errors, the act was seriously mutilated in its passage through the legislature, and it was made to take effect in 1913 instead of on January 1, 1914, as was intended. This error, not discovered until about the first of June, necessitated the making of very hurried preparations for the work of that year. The inspectors on duty on two of our large lakes were retained for that year, and a third inspector was secured to cover the rest of the state. It was arranged that they should retain as their compensation one-half of the fees collected by them, the balance being turned into the state treasury. The total amount collected for the fiscal year was \$1,489.49, and the expenses of administration were \$955.02, leaving a balance of \$534.47 turned into the treasury. In 1914, with the approval of the governor and council, a single inspector was employed in April for a period of five months, which was later extended for another month. He was employed, as the act contemplates, on a salary, so that his entire time was devoted to this work. The results have been very much more satisfactory. The situation is still far from what it ought to be, especially in

the matter of enforcement of the navigation laws. But unquestionably much more has been done during the past year than ever before. The total receipts from fees during this fiscal year were \$2,550.00, the expenses of administration were \$923.24, and the balance of \$1,626.76 was paid into the state treasury, making the total net receipts from boat inspection for two years, above expenses, \$2,161.23.

For many years there has been no thorough inspection of the hulls of larger steamboats, such as is conducted by the federal steamboat inspection service. Last spring we employed an expert who, together with our inspector, made as thorough an inspection of hulls as was possible while the boats were in the water. One steamboat was found to be in unsafe condition, and its operation was ordered discontinued.

We recommend that in the future an inspector be permanently employed, who can be ready to take advantage of the most favorable opportunities for inspection, and may also, as the statute provides, "perform such duties with reference to the department of the public service commission as said commission shall direct."

There ought during the summer season to be on all our large inland waters inspectors continually engaged in the work of supervising the operation and equipment of power boats, both public and private. The commission's inspector or inspectors, acting under the direction of our chief engineer, would naturally become more familiar than anyone else with the requirements in all parts of the state in the way of lights, buoys, dredging, and other improvements in our navigable waters. And the supervision of these matters might well be placed in the hands of this commission, to be worked out in a systematic and balanced manner, with due regard to all sections of the state, instead of being, from session to session, the subject of special legislation.

If this is done, the proceeds from the boat inspections should all be available for these purposes.

Private motorboats, of course, far outnumber those kept for hire, and require more supervision to see that they do

not endanger the general safety and comfort by disregard of the navigating rules. They also share equally with the public boats in the benefits derived from lights, buoys and other safeguards provided at the public expense. It seems not unreasonable that they should in some small measure contribute towards meeting this expense. A very small registration fee would probably provide funds sufficient to maintain all needed lights and buoys, and perform necessary dredging and removal of obstructions. The amount expended during the past year for lights and buoys, was \$1,832.71, principally for labor, the greater part of which would be performed by our inspectors. The balance of fees collected for boat inspection over the expenditures on that account was \$1,416.22. This balance, with the amount derived from a small registration fee for private boats, would apparently provide funds sufficient to employ an inspector on each of our large lakes for the entire season, who would, with some slight assistance, attend to the lights and buoys as well as the inspection of boats and enforcement of the navigation laws.

We believe that this would be an economical arrangement, and would produce just results in placing the cost of improvements of our navigable waters upon those who use them.

FURTHER LEGISLATIVE SUGGESTIONS.

SUPPORT OF DEPARTMENT.

In our last report to the legislature we pointed out that large expenditures on the part of the commission were frequently made necessary by application for approval by the commission of proposed issues of securities, and by applications for approval of proposed leases and transfers, and we suggested that a law be passed requiring the payment of a small percentage fee for the approval of issues of stock and bonds, similar to laws now in force in several other states. We further suggested that some provision

ought to be made in the law so that in rate cases the commission might require the payment, in whole or in part, of the expenses attendant upon a rate investigation by the utility or railroad involved when the rates investigated were found to be unjust or unreasonable. We further said:

“The expense of supervising the public service corporations is due to the nature of those corporations themselves and to the extraordinary and generally monopolistic powers conferred upon them by the people. Such supervision is a necessary consequence of the existence of corporate bodies having such exceptional opportunities for oppression of the public whom they serve; and it is not unreasonable that its cost be regarded as a corporate rather than a public expense.”

In the special act providing for an investigation of the rates of the Manchester Street Railway it was provided that the expenses incurred by the commission should be paid by the company, and they were so paid. The act providing for a further investigation of rates upon the Boston & Maine Railroad provided not only that the expenses of such further investigation should be paid by the railroad, but that, before the work began, the expenses of the 1911 rate investigation should be repaid to the state treasurer by the railroad. For the expenses of the commission in general, provision was also made by an amendment to the Public Service Commission Act, which provided for the payment by the petitioners of expenses incurred in capitalization, transfer and condemnation cases, and gave the commission power to order the payment of costs incurred in rate cases by the public service corporation affected. The amendment further provided that the expenses of the commission not covered by fees and costs collected (with the exception of the salaries of the commissioners and certain unimportant incidentals) should be levied as a special tax upon the utilities and railroads supervised by the commission, one-half upon the utilities and one-half upon the railroads.

The amendment to the Public Service Commission Act last mentioned failed to take effect through an accidental mutilation of the bill in the senate, which occurred through the pasting of an amendment over the provisions mentioned and over other provisions contained in the bill, whereby the bill was engrossed and signed by the governor in different form from that in which it passed the house and senate.

The effect of this miscarriage of legislative intent was in part overcome by the exercise of the power of this commission to make rules, whereunder the commission, by rule, adopted in capitalization, transfer and condemnation cases the same fees which had been provided for in the bill which had passed the legislature. While, however, we have felt that the power to make rules, construed in connection with other provision of the act relative to fees, authorized the making of rules fixing reasonable fees in cases voluntarily entered before the commission, we have not felt that such power enabled us to order the payment of costs in rate cases, by parties not voluntarily before the commission.

We call attention to this matter, upon which action by the last legislature accidentally failed, and repeat the recommendations which we made to that body. If the incoming legislature should provide for the payment of the expenses of this department by a special tax upon the utilities supervised, we recommend that the salaries of the commissioners be not included in the expenses so levied.

SERVICE OF ORDERS OF COMMISSION.

By the accidental mutilation of the bill amending the public service commission act, at the last session of the legislature, in the manner which we have already mentioned, all provisions for the service of orders of this commission were struck out. We recommend that the legislation upon this point, which thus accidentally failed at the last session, be enacted by the incoming legislature.

CLERK OF COMMISSION.

It is impossible for any member of this commission to perform the duties appertaining to the office of clerk of the commission and at the same time perform the duties of a commissioner. Shortly after the commission was organized it became necessary to employ some person who should give his time exclusively to the clerical work of the commission as its secretary. This employee was recognized by paragraph (o), section 2 of the Public Service Commission Act, added by amendment in section 6 of chapter 145 of the Laws of 1913, which gave him the title of assistant clerk and authorized him to perform all of the duties appertaining to the office of clerk. He is in fact the clerk of the commission, and we recommend that the act be so amended as to give him his appropriate title, so that orders and other papers issued by the commission may be signed by him as clerk instead of as assistant clerk, as now required under the law.

DISQUALIFICATION OF COMMISSIONERS.

Paragraph (h) of section 2 of the Public Service Commission Act provides that "no commissioner shall sit upon the hearing of any question which the commission is to decide in a judicial capacity who would be disqualified for any cause, except exemption from service, to act as a juror upon the trial of the same question between the same parties in an action at law." This is a reenactment of section 8 of chapter 155 of the Public Statutes relative to railroad commissioners. Its meaning is not entirely clear. It has, however, been claimed that it operates to disqualify a commissioner from sitting in any case where he has formed any opinion on any of the issues to be therein determined. The provision, if so construed, is wholly inconsistent with other provisions of the act which make it the duty of the commission to investigate and make inquiry as to any act or thing done or omitted to be done in violation of law by any railroad corporation or public utility, and to investigate com-

plaints made as to rates, and authorize the commission after hearing on complaint or on its own motion, to make orders whenever it is of the opinion that any public utility or railroad corporation is not performing its lawful duty to furnish service and facilities reasonably safe and adequate at just and reasonable rates, or that a new rate schedule filed and proposed to be put into effect is unjust or unreasonable.

In such cases the information furnished by the particular public utility or railroad corporation affected, in its annual reports or in reply to inquiries made by the commission, and information furnished by other like utilities or railroads in their reports to the commission, with which it is the duty of the commission to keep familiar, may be the basis of an opinion which leads the commission to believe that a hearing should be held at which all of the facts may be fully disclosed, and the public utility or railroad affected afforded an opportunity to be fully heard as to rates or service appearing in the first instance to the commission to be unjust, unreasonable or inadequate, but perhaps, in fact, just, reasonable and adequate. If the contention before referred to is valid, the better informed the commission becomes as to the public service corporations of the state, and as to proper standards of service and rates the less cases they may sit upon, and after a few years it might prove to be the exception rather than the rule when any commissioner could sit upon any case arising under the provisions of the act.

There is no provision similar to that which we have here referred to in the commission law of any other state that we know of. In a recent case before this commission, affecting joint fares upon two street railroads, the right of each of the commissioners to sit was challenged by the attorney for one of the railroads affected, upon the ground that they had previously formed an opinion with reference to the merits of the case. The facts were that the same case had previously been before the commission, and had been heard, but no order had been made, because the law in force at the time of the first hearing did not give the

commission power to make joint rates. The legislature of 1913 amended the act in this respect, and the case was again brought before the commission. The commission then ruled that the provision to which we have referred did not apply to cases in which the commission was to exercise its legislative powers. A joint rate was established by the commission and was put into effect without appeal, so that the legal question raised as to the qualifications of the commissioners to sit was not passed upon by the supreme court.

We recommend such amendment of the paragraph quoted as shall make clear what constitutes disqualification of a commissioner, and to what classes of cases such disqualification extends.

EXPENSES OF COMMISSION.

The following is a statement of the expenditures and receipts of the commission for the two years ending August 31, 1914, grouped according to the subdivisions under which the appropriations were made:

<i>Expenses</i>	<i>1912-13.</i>	<i>1913-14.</i>
Salaries of commissioners.....	\$9,985.27	\$10,700.00
Expenses of commissioners.....	265.27	559.60
Experts, clerks and assistants...	7,242.63	11,405.62
Incidentals (including printing)..	2,981.87	4,998.78
Unexpended balance of 1911-12 appropriation (ch. 248, Laws of 1913)	3,282.90	.....
Inspection of boats (ch. 185, Laws of 1913)	955.02	923.24
Miscellaneous (under ch. 145, Laws of 1913) .....	.....	1,244.74
Total expenses	\$24,712.96	\$29,821.98

Receipts.

Inspection of Boats (ch. 185, Laws of 1913)	\$1,489.49	\$2,550.00
Miscellaneous (under ch. 145, Laws of 1913)	45.81	1,516.07

Service Standards (ch. 124, Laws of 1913)		\$214.50
Total receipts	\$1,535.30	\$4,280.57
Net cost of Department....	\$23,177.66	\$25,551.41

In addition, during the year 1913-14, the following sums were expended, for which, under the law and the rules of the commission, the state has been reimbursed by the parties interested:

Boston & Maine Railroad Rate Case.....	\$6,054.18
Manchester Street Railway Rate Case.....	2,645.99
Nashua Light, Heat & Power Co. Transfer Case	2,269.94
Total	\$10,970.11

The following table shows the net cost of this department chargeable to the state for the year 1913-14, subdivided according to the purposes for which the expenditures were made:

Expenditures.

Expenses of commissioners.....	\$559.60
Secretary (assistant clerk), salary.....	2,500.00
Engineers (regular staff), salaries and expenses	4,156.00
Engineers and other experts employed for valuation and other temporary work, paid for out of the state treasury, and ex- penses of the same.....	1,925.00
Office stenographers	2,266.00
Stenographers for hearings, paid out of the state treasury	507.00
Inspection of boats.....	923.24
Printing and binding reports and orders, and other printing.....	3,272.05
Apparatus for engineering department.....	775.73
Miscellaneous expenditures of the commis- sion	2,247.36
Total expenditures.....	\$19,131.98

Receipts.

Inspection of boats.....	\$2,550.00	
Service inspection and miscellaneous collections	1,730.57	
		<hr/>
Total receipts	\$4,280.57	
		<hr/>
Net expenditures of commission.....	\$14,851.41	
Salaries of commissioners.....	10,700.00	
		<hr/>
Total net expense to the state.....	\$25,551.41	

Of the item of \$1,925 expended for "engineers and other experts," \$1,226 represents the expense of the investigation of the rates of the People's Gas Light Company of Manchester and \$542 the cost of the investigation of express rates.

The commission now employs an assistant clerk, a chief engineer, an assistant engineer, railroad division, an assistant engineer, public utilities division, a chief stenographer and two assistant stenographers in its main office, and a stenographer in the office of its chief engineer. Its total annual pay roll, for regular employees, on the present salary basis, is \$8,626. In several cases salaries will have to be raised during the coming year,—and indeed some should have been raised before now. The salaries of the present force during the coming year will be about \$9,500. Travelling expenses of the commission's employees during the past year chargeable to the appropriation for experts, clerks and assistants, were \$768. In addition, there was paid for extra clerical and stenographic assistance \$547. It is obvious that the appropriation of \$15,000 heretofore made, and requested for each of the next two years, leaves a rather small balance to take care of the extraordinary expense involved in extended rate investigations and like inquiries involving the valuation of large public utility plants. Our assistant engineer, Mr. Nims, has, however, during the past two years had valuable experience in assisting the engineers employed in the extensive valuations of gas, electric and electric railway

properties in Manchester and Nashua, and we expect considerably to reduce the cost to the state of such valuations in the future by availing ourselves of his services.

Our stenographers are all busy all the time, and work is frequently delayed because of lack of a sufficient force to take care of the material on hand. We do not at present contemplate any increase in our stenographic force, but it is obvious that such an increase may become necessary during the next two years. It may seem advisable to employ an efficient male stenographer who can take the testimony at hearings both in the office of the commission and wherever hearings are held throughout the state. The expense of such stenographic assistance during the past year was \$507, in addition to the salaries of our regular force.

In one particular, there should be an addition to the commission's permanent force. There is urgent need of an experienced and thoroughly competent accountant, who shall examine and correct the returns of the various railroads and utilities, condense and tabulate those returns, and prepare the material for our annual statistical report. This report is of very great value, and is absolutely indispensable to intelligent regulation. One member of the commission during the past year devoted about six months of his time to this task, and was able to effect a very great reduction in the size of the report, and a corresponding reduction in its cost. But members of the commission have other and more important work to do, and this task should be put in the hands of a competent accountant and statistician.

The returns made to the commission have disclosed the fact that many utilities have in the past kept no adequate accounts, in some cases a mere cash book constituting their entire accounting system.

The standard systems of accounting prescribed by the commission in compliance with the statute will impose upon these utilities the obligation of keeping books which, though as simple as they can be made while affording the information deemed indispensable, are yet entirely different from

anything to which they have been accustomed. It should be the duty of such an accountant to visit the offices of the several utilities, to see that their accounting officers thoroughly understand the system of accounts, and then by periodic audits to make sure that the accounts are actually kept in proper form. This accountant would also be available for the study of the financial history of corporations under investigation by the commission, and for general assistance in rate and capitalization cases, thus saving to the state the large expense involved in the employment of expert accountants. Such an accountant would have no idle hours.

If it were determined to employ such an accountant, the appropriation for experts, clerks and assistants would have to be increased, because the estimate of \$15,000 for this purpose makes no allowance for this increase in the regular pay roll of the commission.

A special appropriation of \$1,000 is requested for the purchase of apparatus required in electrical inspection and meter testing. It would be desirable, if possible, to have that appropriation made available during the present fiscal year, as the standards of electric service have now gone into effect, and the work of inspection should be begun without delay.

The only increase in our annual appropriations which we have requested is the raising of the appropriation for incidentals, including printing, from \$5,000 to \$6,000. More than the amount of the appropriation was expended during the past year for these purposes, the excess being charged against the miscellaneous receipts by law made applicable to the general uses of the commission. These miscellaneous receipts are of course variable. And it seems more business-like to make the estimates correspond as nearly as possible to the anticipated expenditures. The legislature can rest assured that we shall spend no more from appropriations made than is absolutely necessary for the proper performance of our duties. At the end of the last fiscal year there re-

mained unexpended from general appropriations for our use that year, and from moneys collected by the commission, available for general commission uses, \$4,577.64.

No change is made in the amount requested to be appropriated for the expenses of the commissioners. Should the legislature discontinue the practice of contracting for the transportation of state officials at reduced rates, our traveling expenses would necessarily be considerably increased, as the commissioners do not now have free transportation, except when engaged in the actual work of inspection. But the appropriation is probably sufficient to take care of any increase that can be foreseen.

At the last session of the legislature, we requested that the question of the salaries of the commissioners be re-examined. This was done, but under such circumstances that the result may perhaps not be regarded as a final determination of this question. We respectfully ask that the subject be again given consideration.

EDWARD C. NILES,

JOHN E. BENTON,

THOMAS W. D. WORTHEN.

Commissioners.

CONCORD, December 1, 1914.

PART II.

REPORTS OF STEAM RAILROADS

For The Year Ending June 30, 1914.

ATLANTIC & ST. LAWRENCE RAILROAD COMPANY.

HISTORY.

Date of organization: September 25, 1845.
Chartered in Maine, February 10, 1845; New Hampshire, July 30, 1847;
Vermont, October 17, 1848.

PRINCIPAL OFFICERS.

President, E. J. Chamberlin; Vice-President, H. G. Kelley; Treasurer, Frank Scott; General Auditor, W. H. Ardley, Montreal, Que.; Clerk, H. P. Sweetser, Portland, Me.

DIRECTORS.

E. J. Chamberlin, H. G. Kelley, J. E. Dalrymple, Montreal, Que.; W. H. Moulton, W. W. Duffett, Frank D. True, E. A. Noyes, P. G. Brown, H. P. Sweetser, Portland, Me.

Terms expire August 5, 1913, or when successors are elected.

FACTS PERTAINING TO CONTROL.

Date of last meeting of stockholders for election of directors: June 11, 1912.

Total number of stockholders of record: 1,605.

Each share of stock has one vote.

No issue of securities has contingent voting rights or special privileges in the election of directors.

No corporation or corporations, transportation or other, controlled the respondent on June 30, 1914.

The Grand Trunk Railway Company of Canada operates the railroad (under lease for 999 years, dated August 5, 1853), and guarantees the dividend of 6% per annum on common stock (\$5,484,000).

ROAD OPERATED.

Main line, from Portland, Me., to Island Pond, Vt.....	149.58 miles
Extension from Island Pond, Vt., to Canadian line.....	15.64
Norway Branch Railroad from South Paris, Me., to Norway, Me.....	1.50

Total mileage operated	166.72 miles
Road operated in New Hampshire.....	52.06 miles

CAPITALIZATION.

Capital stock authorized and outstanding:

Common, 11,290 shares, total par value.....	\$5,464,360
190 shares, total par value.....	19,000
40 shares, total par value.....	640

Total 11,520 shares.....	\$5,484,000
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Dividends, declared and paid during year, 6%.....	\$330,598
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Total cash realized from issue of stock.....	\$5,484,000
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Funded debt, authorized and outstanding:

First mortgage bonds, issued 1864, matured 1884.....	Par value. \$1,499,916
Second mortgage bonds, issued 1871, matured 1891.....	712,932
Third mortgage bonds, issued 1889, matured 1909.....	786,984
Balance, difference on exchange of bonds, 1864, 1871 and 1889	168

Plain bonds, debentures and notes: £90,000 sterling, Island Pond to Canadian boundary line, issued 1852, matured 1882	438,000
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Total	\$3,438,000
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Interest, accrued and paid during year, 6%.....	\$206,280
Total cash realized from sale of bonds.....	\$3,438,000

CAPITALIZATION PER MILE OF LINE.

Capital stock, \$33,192; funded debt, \$20,809; total, \$54,001.

SECURITY FOR FUNDED DEBT.

Form.	Road Involved.	Miles.	Amount per mile.
First mortgage	Island Pond to Portland, Me.....	149.58	\$20,056
Second mortgage			
Third mortgage			
Isl. Pond Debent.	Island Pond to Can. boundary line..	15.64	28,005

ROAD AND EQUIPMENT.

Investment Since June 30, 1907.

	Total expenditures July 1, 1907, to June 30, 1914.
Road:	
Right of way and station grounds.....	\$2,951.00
Bridges, trestles and culverts.....	689.06
Crossings and signs	1,070.47
Telegraph and telephone lines.....	11,608.91
Shops, enginehouses and turntables.....	6,935.67
Miscellaneous structures.....	857.46
Total—entire line	\$24,112.57
Total—state of New Hampshire	5,010.51

SUMMARY OF ROAD AND EQUIPMENT.

	Entire line.	State of New Hampshire.
Investment to June 30, 1907:		
Road and equipment	\$8,922,000.00*	\$1,494,357.00*
Investment since June 30, 1907.....	24,112.57	5,010.51
Total	\$8,946,112.57	\$1,499,367.51
Cost per mile of line.....	\$54,146.57	\$28,800.76

INCOME ACCOUNT.

Operating income:		
Rail operations—		
Operating revenues.....		\$1,657,507.32
Operating expenses		1,411,263.09
Net operating revenues		\$246,244.23
Taxes accrued		129,735.53
Operating income		\$116,508.70
Other income:		
Joint facilities	\$293.00	
Contributions from other companies.....	432,553.60	
Total other income.....		432,846.60
Gross corporate income.....		\$549,355.30
Deductions from gross corporate income:		
Deductions for lease of other roads.....	\$330,598.00	
Hire of equipment (balance).....	12,477.30	
Interest accrued on funded debt.....	206,280.00	
Total deductions		\$549,355.30

*Equipment furnished by lessee.

OPERATING REVENUES.

	Entire Line.		State of New Hampshire.	
	Total Revenues.	Intrastate Revenues.	Interstate Revenues Assigned to State.	Total Revenues.
Revenue from transportation:				
Freight revenue	\$1,147,275.18	\$33,069.48	\$356,963.16	\$390,032.64
Passenger revenue ...	\$369,656.35	\$29,333.83	\$71,078.36	\$100,412.19
Excess baggage revenue	3,319.10	398.85	600.50	999.35
Parlor and chair car revenue	1,263.93	315.95	313.72	329.67
Mail revenue	23,816.87	.....	7,424.26	7,424.26
Express revenue ...	29,922.49	1,022.30	1,589.19	2,611.49
Milk revenue (on passenger trains)	13,029.89	170.01	759.52	929.53
Other passenger-train revenue	2,627.83	18.00	269.39	287.39
Total passenger service train revenue..	\$443,636.46	\$30,958.94	\$82,034.94	\$112,993.88
Switching revenue....	12,216.72	332.00	.....	332.00
Special service train revenue	1,590.61	100.00	355.81	455.81
Miscellaneous transportation revenue.....	583.33	3.00	.....	3.00
Total revenue from transportation ..	\$1,605,302.30	\$64,463.42	\$439,353.91	\$503,817.33
Revenues from operations other than transportation:				
Station and train privileges	\$676.07	\$4.63	\$168.30	\$172.93
Parcel-room receipts..	410.80	.....	.....	.....
Storage-freight	1,552.89	27.02	.....	27.02
Storage-baggage	215.85	38.75	.....	38.75
Car service	18,183.00	13,394.00	.....	13,394.00
Rents of buildings and other property.....	2,467.90	495.09	.....	495.09
Miscellaneous	28,698.51	.....	.....	.....
Total revenue from operations other than transportation	\$52,205.02	\$13,959.49	\$168.30	\$14,127.79
Total operating revenues	\$1,657,507.32	\$78,422.91	\$439,522.21	\$517,945.12

OPERATING EXPENSES.

	Entire Line.	State of New Hampshire.
Maintenance of way and structure:		
Superintendence	\$6,455.55	\$2,272.79
Ballast	2,441.52	1,679.77
Ties	59,550.18	18,447.21
Rails	23,203.30	5,994.97
Other track material.....	16,355.93	4,167.81
Roadway and track.....	70,921.83	13,295.21
Removal of snow, sand and ice.....	11,536.09	2,505.77
Bridges, trestles and culverts.....	12,673.41	3,882.68
Over and under grade crossings.....	1,409.72	3.25
Grade crossings, fences, cattle guards and signs	4,379.28	1,229.73
Snow and sand fences and snowsheds.....	48.76	48.76
Signals and interlocking plants.....	1,370.96	344.22
Telegraph and telephone lines.....	336.19	176.44
Buildings, fixtures and grounds.....	36,540.33	6,218.51

Docks and wharves.....	\$12,138.97	\$2.52
Roadway tools and supplies.....	1,849.37	340.69
Injuries to persons.....	636.30	12.32
Stationery and printing.....	356.61	69.67
Other expenses	98.26	19.68
Maintaining joint tracks, yards and other facilities—Dr.	881.61	.....
Maintaining joint tracks, yards and other facilities—Cr.	429.93	403.22
Total—maintenance of way and structures	\$262,754.24	\$60,308.78
Maintenance of equipment:		
Superintendence	\$5,743.61	\$1,828.85
Steam locomotives—repairs	98,959.24	27,594.15
Passenger-train cars—repairs	23,738.21	7,346.34
Freight-train cars—repairs	115,398.47	39,824.30
Freight-train cars—renewals	16.33	5.28
Work equipment—repairs	3,460.00	1,183.54
Shop machinery and tools.....	9,834.60	3,006.22
Injuries to persons.....	292.47	98.75
Stationery and printing.....	847.55	193.15
Other expenses	97.20	349.30
Total—maintenance of equipment.....	\$258,355.02	\$80,720.72
Traffic expenses:		
Superintendence	\$8,865.72	\$2,824.69
Outside agencies	30,003.16	9,824.89
Advertising	5,705.88	1,800.26
Traffic associations	1,481.30	463.31
Fast freight lines.....	2,158.09	674.77
Industrial and immigration bureaus.....	332.46	104.95
Stationery and printing.....	3,960.05	1,238.95
Other expenses	47.41	14.58
Total—traffic expenses	\$52,554.07	\$16,946.35
Transportation expenses:		
Superintendence	\$20,550.99	\$5,841.97
Dispatching trains	11,004.42	1,697.19
Station employees	143,485.77	27,257.21
Weighing and car-service associations.....	75.96	22.47
Coal and ore docks	10,567.86	.....
Station supplies and expenses.....	17,668.49	3,338.80
Yardmasters and their clerks.....	8,355.38	842.34
Yard conductors and brakemen.....	28,857.84	955.27
Yard switch and signal tenders.....	3,218.08	494.95
Yard supplies and expenses.....	3,185.95	86.00
Yard enginemen	21,758.56	3,779.60
Enginehouse expenses—yard	3,431.81	715.10
Fuel for yard locomotives	28,085.78	2,781.30
Water for yard locomotives.....	1,056.56	119.09
Lubricants for yard locomotives.....	348.70	26.44
Other supplies for yard locomotives.....	593.87	137.76
Operating joint yards and terminals—Dr... ..	418.10	.....
Operating joint yards and terminals—Cr... ..	135.50	.....
Road enginemen	68,357.16	21,868.15
Enginehouse expenses—road	16,211.15	4,935.34
Fuel for road locomotives.....	223,825.34	60,012.01
Water for road locomotives.....	8,271.16	2,326.08
Lubricants for road locomotives.....	1,707.83	250.03
Other supplies for road locomotives.....	3,358.91	686.75
Road trainmen	88,944.43	28,638.09
Train supplies and expenses.....	18,261.10	2,043.04
Interlockers and block and other signals—operation	107.52	190.34
Crossing flagmen and gatemen.....	3,532.55	2,972.21
Drawbridge operation	1,488.38	29.64
Clearing wrecks	4,215.86	1,065.64
Telegraph and telephone—operation.....	1,151.91	462.17
Operating floating equipment.....	13.60	.....
Stationery and printing.....	6,729.60	1,359.00
Other expenses	1,558.67	454.94
Loss and damage—freight.....	8,903.06	2,318.23

Loss and damage—baggage.....	\$220.38	\$117.44
Damage to property.....	8,102.60	1,816.50
Damage to stock on right of way.....	568.52	423.37
Injuries to persons.....	17,606.75	1,818.85
Operating joint tracks and facilities—Dr...	120.99	7.72
Operating joint tracks and facilities—Cr...	742.90	539.81
Total—transportation expenses	\$784,997.19	\$181,356.27
General expenses:		
Salaries and expenses of general officers....	\$8,831.82	\$2,798.60
Salaries and expenses of clerks and attendants	15,600.69	4,917.98
General office supplies and expenses.....	1,789.08	569.42
Law expenses	9,232.98	3,224.43
Insurance	6,780.02	2,223.13
Relief department expenses	528.94	168.74
Pensions	4,531.77	1,452.04
Stationery and printing.....	2,756.62	870.19
Valuation expenses	3.00	.....
Other expenses	2,547.65	806.07
Total general expenses.....	\$52,602.57	\$17,030.65
Recapitulation of expenses:		
Maintenance of way and structures.....	\$262,754.24	\$60,303.78
Maintenance of equipment.....	258,355.02	80,720.72
Traffic expenses	52,554.07	16,946.35
Transportation expenses	784,997.19	181,356.27
General expenses	52,602.57	17,030.65
Total operating expenses.....	\$1,411,263.09	\$356,362.77
Ratio of operating expenses to operating revenues, per cent.....	85.14	68.80

RENTS RECEIVABLE.

Joint yards and terminals, interest on value of track scales and siding, and interest on one-half value of station at Groveton	\$293.00
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HIRE OF EQUIPMENT.

Equipment is combined for Grand Trunk Railway system per diem for each subsidiary line computed on train mileage basis, amount.....	\$12,477.30
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TAXES.

State.	Ad Valorem.	Specific.	Total.
Maine	\$23,335.74	\$51,227.67	\$74,563.41
New Hampshire	36,282.02	36,282.02
Vermont	17,546.92	100.00	17,646.92
U. S. government.....Internal revenue .....	.....	.....	1,243.18
Grand total			\$129,735.53

COMPARATIVE GENERAL BALANCE SHEET.

June 30, 1913	Assets.	June 30, 1914
	Property investment:	
	Road and equipment—	
	Investment to June 30, 1907—	
\$8,922,000.00	Road	\$8,922,000.00
	Investment since June 30, 1907—	
.....	Road	24,112.57
<u>\$8,922,000.00</u>	Total	<u>\$8,946,112.57</u>
	Deferred debit items:	
.....	Rents and insurance paid in advance..	3.52
<u>\$8,922,000.00</u>	Grand total	<u>\$8,946,116.09</u>

Liabilities.

		Stock:	
<u>\$5,484,000.00</u>		Common stock not held by company....	<u>\$5,484,000.00</u>
		Mortgage, bonded, and secured debt:	
.....		Obligations for advances received for construction	<u>24,112.57</u>
		Working liabilities:	
<u>\$3,438,000.00</u>		Matured mortgage, bonded and secured debt unpaid	<u>\$3,438,000.00</u>
.....		Working advances due to other companies	<u>3.52</u>
<u>\$3,438,000.00</u>		Total	<u>\$3,438,003.52</u>
<u>\$8,922,000.00</u>		Grand total	<u>\$8,946,116.09</u>

EMPLOYEES AND SALARIES—ENTIRE LINE.

Class.	Number on June 30.	Total No. of days worked.	Total yearly com- pensation.	Average daily com- pensation.
General officers	3	510	\$8,952.04	\$17.55
Other officers	25	4,289	19,878.94	4.63
General office clerks.....	42	15,251	26,157.91	1.92
Station agents	35	13,504	31,580.25	2.34
Other station men.....	122	62,441	111,994.10	1.79
Enginemen	35	10,320	58,854.31	5.70
Firemen	42	10,320	33,829.64	3.28
Conductors	30	9,890	41,043.83	4.15
Other trainmen	86	29,201	85,948.10	2.95
Machinists	39	11,105	28,291.86	2.55
Carpenters	43	13,354	30,995.10	2.32
Other shopmen	28	8,523	23,557.65	2.76
Section foremen	39	12,976	29,647.35	2.28
Other trackmen	137	41,483	70,202.44	1.69
Switch tenders, crossing ten- ders, and watchmen.....	25	8,846	15,138.39	1.71
Telegraph operators and dis- patchers	37	9,638	22,000.49	2.28
All other employees and la- borers	377	80,783	161,499.99	2.00
Total (including general officers)	1,145	342,434	\$799,572.39	\$2.33
Less general officers.	3	510	8,952.04	17.55
Total (excluding general officers)	1,142	341,924	\$790,620.35	\$2.31
Distribution of above:				
Maintenance of way and structures	319	72,844	\$141,586.07	\$1.94
Maintenance of equipment	169	50,390	115,109.88	2.28
Traffic expenses	17	6,226	16,440.78	2.64
Transportation expenses..	607	202,181	502,035.40	2.48
General expenses	33	10,793	24,400.26	2.26
Total (including general officers)	1,145	342,434	\$799,572.39	\$2.33
Less general officers.	3	510	8,952.04	17.55
Total (excluding general officers)	1,142	341,924	\$790,620.35	\$2.31

EMPLOYEES AND SALARIES—STATE OF NEW HAMPSHIRE.

Class.	Number on June 30.	Total No. of days worked.	Total yearly com- pensation.	Average daily com- pensation.
General officers	1	162	\$2,844.29	\$17.56
Other officers	13	837	5,003.25	5.98
General office clerks	13	4,730	8,082.28	1.71
Station agents	10	3,913	8,834.25	2.26
Other station men	18	5,429	9,772.39	1.80
Enginemen	10	2,784	16,675.64	5.99
Firemen	12	2,784	9,585.21	3.44
Conductors	28	3,302	12,748.01	3.86
Other trainmen	56	6,604	16,997.58	2.57
Machinists	1	408	896.94	2.20
Carpenters	6	1,875	4,218.75	2.25
Section foremen	13	4,321	9,691.99	2.24
Other trackmen	39	12,106	20,338.63	1.68
Switch tenders, crossing ten- ders, and watchmen	10	3,736	6,500.87	1.74
Telegraph operators and dis- patchers	14	3,767	8,212.43	2.18
All other employees and la- borers	53	9,641	18,493.04	1.92
Total (including general officers)	297	66,399	\$158,895.55	\$2.39
Less general officers	1	162	2,844.29	17.56
Total (excluding general officers)	296	66,237	\$156,051.26	\$2.36
Distribution of above:				
Maintenance of way and structures	92	20,128	\$38,058.18	\$1.89
Maintenance of equipment	8	3,202	6,488.01	2.03
Traffic expenses	6	1,978	5,222.41	2.64
Transportation expenses	181	37,662	101,374.36	2.67
General expenses	10	3,429	7,752.59	2.26
Total (including general officers)	297	66,399	\$158,895.55	\$2.39
Less general officers	1	162	2,844.29	17.56
Total (excluding general officers)	296	66,237	\$156,051.26	\$2.36

TRAFFIC AND MILEAGE STATISTICS—ENTIRE LINE.

Passenger traffic:

Number of passengers carried earning revenue	425,093
Number of passengers carried one mile	17,774,925
Number of passengers carried one mile per mile of road	106,625
Average distance carried, miles	41.814
Total passenger revenue	\$369,656.35
Average amount received from each passenger .....	.86959
Average receipts per passenger per mile .....	.02080
Total passenger service train revenue	443,636.46
Passenger service train revenue per mile of road	2,660.97
Passenger service train revenue per train-mile	1.18295

Freight traffic:

Number of tons carried of freight earning revenue	2,027,744
Number of tons carried one mile	189,975,101
Number of tons carried one mile per mile of road	1,139,486
Average distance haul of one ton, miles	93.688
Total freight revenue	\$1,147,275.18
Average amount received for each ton of freight .....	.56579
Average receipts per ton, per mile .....	.00604
Freight revenue per mile of road	6,881.45
Freight revenue per train-mile	2.89949

Total traffic:		
Operating revenues		\$1,657,507.32
Operating revenues per mile of road.....		9,941.86
Operating revenues per train-mile.....		1.94211
Operating expenses		1,411,263.09
Operating expenses per mile of road.....		8,464.87
Operating expenses per train-mile.....		1.65359
Net operating revenue.....		246,244.23
Net operating revenue per mile of road.....		1,476.99
Average number of passengers per car-mile.....		13
Average number of passengers per train-mile.....		47
Average number of passenger cars per train-mile...		5.46
Average number of tons of freight per loaded car-mile		21.21
Average number of tons of freight per train-mile....		222.56
Average number of freight cars per train-mile.....		29.46
Average number of loaded cars per train-mile.....		18.74
Average number of empty cars per train-mile.....		9.73
Average mileage operated during year.....		166.72
Locomotive mileage:		
Revenue service—		
Freight locomotive-miles	494,117	
Passenger locomotive-miles	384,816	
Special locomotive-miles	297	
Switching locomotive-miles	225,754	
Total revenue locomotive-mileage		1,104,984
Nonrevenue service locomotive-miles.....		37,938
Car mileage:		
Revenue service—		
Freight car-miles—		
Loaded	8,958,879	
Empty	4,652,506	
Caboose	474,486	
Total freight car-miles		14,085,871
Passenger car-miles—		
Passenger	944,896	
Sleeping, parlor, and observation.	371,225	
Other passenger-train cars.....	729,086	
Total passenger car-miles		2,045,207
Special car-miles—		
Freight—loaded	1,411	
Caboose	285	
Passenger	537	
Total special car-miles		2,233
Total revenue car mileage		16,133,311
Nonrevenue service car-miles.....		131,609
Train mileage:		
Revenue service—		
Freight train-miles	478,133	
Passenger train-miles	375,025	
Special train-miles	297	
Total revenue train mileage.....		853,455
Nonrevenue service train-miles		37,908

TRAFFIC AND MILEAGE STATISTICS—STATE OF NEW HAMPSHIRE.

Passenger traffic:		
Number of passengers carried, earning revenue.....		191,504
Number of passengers carried one mile.....		4,905,562
Number of passengers carried one mile per mile of road		94,229
Average distance carried, miles		25.616
Total passenger revenue.....		\$100,412.19
Average amount received from each passenger.....		.52433

Average receipts per passenger per mile.....	\$0.02047
Total passenger service train revenue.....	112,993.88
Passenger service train revenue per mile of road....	2,170.45
Passenger service train revenue per train-mile.....	.96522
Freight traffic:	
Number of tons carried of freight-earning revenue..	1,822,369
Number of tons carried of intrastate freight-earning revenue	63,820
Number of tons carried one mile.....	68,422,146
Number of tons carried one mile (intrastate).....	916,905
Number of tons carried one mile per mile of road....	1,314,294
Number of tons carried one mile (intrastate) per mile of road	17,612
Average distance haul of one ton, miles.....	37.546
Average distance haul of one ton (intrastate), miles.	14.367
Total freight revenue	\$390,032.64
Total intrastate freight revenue.....	33,069.48
Average amount received for each ton of freight....	.21403
Average amount received for each ton of intrastate freight .....	.51817
Average receipts per ton per mile.....	.00570
Average receipts per ton per mile (intrastate).....	.03607
Freight revenue per mile of road.....	7,491.98
Freight revenue per train-mile	2.52643
Total traffic:	
Operating revenues	\$517,945.12
Operating revenues per mile of road.....	9,949.00
Operating revenues per train-mile.....	1.90739
Operating expenses	356,362.77
Operating expenses per mile of road.....	6,845.23
Operating expenses per train-mile.....	1.31234
Net operating revenue	161,582.35
Net operating revenue per mile of road.....	3,103.77
Average number of passengers per car-mile.....	12
Average number of passengers per train-mile.....	42
Average number of passenger cars per train-mile....	5.41
Average number of tons of freight per loaded car-mile	22.04
Average number of tons of freight per train-mile....	252.06
Average number of freight cars per train-mile.....	31.96
Average number of loaded cars per train-mile.....	19.81
Average number of empty cars per train-mile.....	11.15
Average mileage operated during year.....	52.06
Locomotive mileage:	
Revenue service—	
Freight locomotive-miles	157,597
Passenger locomotive-miles	118,912
Special locomotive-miles	101
Switching locomotive-miles	38,691
Total revenue locomotive-mileage	315,301
Nonrevenue service locomotive-miles	9,919
Car mileage:	
Revenue service—	
Freight car-miles—	
Loaded	3,059,015
Empty	1,720,676
Caboose	154,043
Total freight car-miles	4,933,734
Passenger car-miles—	
Passenger	294,188
Sleeping, parlor, and observation.	114,135
Other passenger-train cars.....	225,104
Total passenger car-miles	633,427

Special car-miles—		
Freight loaded	718	
Caboose	101	
Passenger	199	
Total special car-miles		1,018
Total revenue car mileage		5,568,179
Nonrevenue service car-miles		48,403
Train mileage:		
Revenue service—		
Freight train-miles	154,381	
Passenger train-miles	117,065	
Special train-miles	101	
Total revenue train mileage		271,547
Nonrevenue service train-miles		9,919

FREIGHT TRAFFIC MOVEMENT—ENTIRE LINE.

Commodity.	Tons originating on this road.	Tons received from other roads.	Total tons.	Per cent.
Products of agriculture:				
Grain	482	497,070	497,552	24.53
Flour	267	27,476	27,743	1.37
Other mill products	80	10,928	11,008	.54
Hay	3,148	3,408	6,556	.32
Tobacco	15	552	567	.03
Cotton	46	1,574	1,620	.08
Fruit and vegetables	4,126	14,997	19,123	.95
Other products of agriculture.	802	1,558	2,360	.12
Total	8,966	557,563	566,529	27.94
Products of animals:				
Live stock	2,022	1,517	3,539	.17
Dressed meats	287	33,420	33,707	1.66
Other packing-house products.	2,909	7,170	10,079	.49
Poultry, game and fish	23	506	529	.05
Wool .....	.....	795	795	.04
Hides and leather	23	1,382	1,405	.07
Other products of animals .....	.....	7,502	7,502	.36
Total	5,264	52,292	57,556	2.84
Products of mines:				
Anthracite coal	23,371	7,306	30,677	1.51
Bituminous coal	119,928	1,447	121,375	5.98
Coke .....	.....	1,256	1,256	.06
Ores .....	.....	58,777	58,777	2.90
Stone, sand and other like articles	2,833	21,309	24,142	1.19
Other products of mines	648	21,964	22,612	1.12
Total	146,780	112,059	258,839	12.76
Products of forests:				
Lumber	47,667	24,375	72,042	3.56
Other products of forests	203,297	351,457	554,754	27.35
Total	250,964	375,832	626,796	30.91
Manufactures:				
Petroleum and other oils	962	2,832	3,794	.19
Sugar	27	12,687	12,714	.62
Naval stores	562	399	961	.05
Iron, pig and bloom	108	570	678	.03
Iron and steel rails	20	108	128	.01
Other castings and machinery	546	1,629	2,175	.11
Bar and sheet metal	46	6,858	6,904	.34
Cement, brick and lime	1,417	8,429	9,846	.49

Commodity.	Tons originating on this road.	Tons received from other roads.	Total tons.	Per cent.
Agricultural implements	111	1,652	1,763	.09
Wagons, carriages, tools, etc.	4	1,117	1,121	.06
Wines, liquors and beers.....	27	1,964	1,991	.10
Household goods and furniture	39	398	437	.02
Other manufactures	151,304	190,630	341,934	16.85
Total	155,173	229,273	384,446	18.96
Merchandise	16,271	43,297	59,568	2.94
Miscellaneous	16,569	57,441	74,010	3.65
Total tonnage	599,987	1,427,757	2,027,744	100.00

INTRASTATE FREIGHT TRAFFIC MOVEMENT—STATE OF NEW HAMPSHIRE.

Products of agriculture:				
Grain	135	89	224	.35
Flour	108	..	108	.17
Hay	1,022	42	1,064	1.67
Fruit and vegetables	191	..	191	.30
Other products of agriculture.	41	..	41	.06
Total	1,497	131	1,628	2.55
Products of animals:				
Live stock	18	23	41	.07
Dressed meats	251	..	251	.39
Other packing-house products.	745	..	745	1.17
Total	1,014	23	1,037	1.63
Products of forests:				
Lumber	3,812	..	3,812	5.97
Other products of forests.....	50,157	..	50,157	78.59
Total	53,969	..	53,969	84.56
Manufactures:				
Sugar	27	..	27	.04
Other castings and machinery	13	10	23	.04
Household goods and furniture	3	..	3	.....
Other manufactures	4,837	..	4,837	7.58
Total	4,880	10	4,890	7.66
Merchandise	170	38	208	.33
Miscellaneous	2,088	..	2,088	3.27
Total tonnage	63,618	202	63,820	100.00

MILES OF ROAD OPERATED.

State.	Line owned.	Line under lease.	Total mileage operated.	Line changes during year.	Steel rails.
Maine, main line.....	82.60	1.50	84.10	.....	84.10
New Hampshire, main line	52.06	....	52.06	.....	52.06
Vermont, main line....	30.56	....	30.56	.....	30.56
Total	165.22	1.50	166.72	.....	166.72
New Hampshire side-tracks	19.74	....	19.74	.....	19.74
Maine and Vermont side-tracks	64.61	....	64.61	.37	64.61
Total, all tracks....	249.57	1.50	251.07	.....	251.07

ACCIDENTS TO PERSONS—STATE OF NEW HAMPSHIRE.

Resulting from Movements of Trains, Locomotives or Cars.

	Train- men.		Other em- ployees.		Pas- sengers.		Other persons tres- passing.		Other persons not tres- passing.		Total.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Falling from locomotives or cars.....	..	1	..	..	..	..	..	..	..	..	..	1
Jumping on or off locomotives or cars....	2	..	..	..	1	..	3
Struck by locomotives or cars	1	1	2	..	..	1	3
Total	1	..	..	..	3	1	2	..	1	1	7

Average number employed during year; trainmen, 106; other employees, 191; total, 297.

RENEWALS OF RAILS AND TIES—STATE OF NEW HAMPSHIRE.

New rails laid during year:

Steel, tons	220,907
Weight per yard, pounds.....	80
Average price per ton at distributing point.....	\$30.00

	Number.	Av. Price.
New ties laid during year:		
Cedar	11,384	\$0.50
Cedar cull	425	.35
Pine	63,376	.65
Pine cull	4,428	.59
Switch ties	2,735	1.49
Oak	9,113	.66
Total	91,461	\$0.65

CONSUMPTION OF FUEL BY LOCOMOTIVES—STATE OF NEW HAMPSHIRE.

Locomotives.	Bituminous coal— tons.	Soft wood— cords.	Total fuel consumed —tons.	Miles run.	Av. lbs. consumed per mile.
Revenue service:					
Freight	14,781	111	14,836	157,597	188.28
Passenger	5,386	41	5,407	118,912	90.94
Special	6	..	6	108	118.81
Switching	1,551	12	1,557	38,691	80.48
Nonrevenue service..	812	6	815	9,919	164.33
Total	22,536	170	22,621	325,220	139.11
Average cost at distributing point.....	\$2.843	\$1.550	\$2.844		

Average cost of rails, ties, coal, and wood, same for entire line and New Hampshire.

Average lbs. coal consumed per locomotive mile, entire line: freight, 188.28; passenger, 90.95; special, 121.21; switching, 80.46; nonrevenue service, 164.27; average total, 133.40.

CHARACTERISTICS OF ROAD—STATE OF NEW HAMPSHIRE.

Alignment: number of curves, 89; miles of curve, 22.56; miles of straight line, 29.50.

Profile: miles of level line, 11.68; number of ascending grades, 32; sum of ascents, feet, 342.6; miles of ascending grades, 14.19; number of descending grades, 50; sum of descents, feet, 563; miles of descending grades, 26.18.

Gauge of track, 4 feet, 8½ inches; miles, 52.06.

BOSTON & MAINE RAILROAD.

HISTORY.

The Boston and Maine Railroad was organized in June, 1835, under the laws of Massachusetts, New Hampshire and Maine. The constituent companies were: Boston and Portland Railroad of Massachusetts; Boston and Maine Railroad of New Hampshire; Maine, New Hampshire, and Massachusetts Railroad of Maine.

For date and authority for each consolidation to date, see pages 277-286 of 1912 Annual Report of the Public Service Commission of New Hampshire.

PRINCIPAL OFFICERS.

President, *Morris McDonald; Vice-President, Wm. J. Hobbs; Treasurer, Herbert E. Fisher; Clerk, Arthur B. Nichols; General Solicitor, Edgar J. Rich; General Auditor, Stuart H. McIntosh; General Manager, Benjamin R. Pollock; Chief Engineer, Arthur B. Corthell; General Superintendent, James D. Tyter; Freight Traffic Manager, Amos S. Crane; General Freight Agent, George H. Eaton; General Passenger Agent, Charles M. Burt; Commissioner of Real Estate, Edward O. Woodward, Boston, Mass.

*Succeeded by James H. Hustis, August 15, 1914.

DIRECTORS.

Richard Olney, Boston, Mass.; Alvah W. Sulloway, Franklin, N. H.; Lucius Tuttle, Brookline, Mass.; Frederic C. Dumaine, Concord, Mass.; James M. Prendergast, Boston, Mass.; Edwin Farnham Greene, Wayland, Mass.; Alexander Cochrane, Boston, Mass.; *Morris McDonald, Portland, Me.; Charles W. Bosworth, Springfield, Mass.; Edward B. Winslow, Portland, Me.; Frank P. Carpenter, Manchester, N. H.; James D. Upham, Claremont, N. H.; George H. Prouty, Newport, Vt.; Samuel Carr, Boston, Mass.

*Resigned February 10, 1914; became effective August 15, 1914.

TRANSPORTATION CORPORATIONS CONTROLLED.

Active corporations:

Sole, direct control, stock ownership—

Concord & Claremont (N. H.) Railroad (see Note 1).....	99.8%
Conway Electric Street Railway Co. (see Note 2).....	59.2
Franklin & Tilton Railroad (see Note 3).....	100
Mount Washington Railway Company (see Note 4).....	100
Newport & Richford Railroad Company (see Note 5).....	100
Peterborough & Hillsborough Railroad (see Note 6).....	100
St. Johnsbury & Lake Champlain Railroad (see Note 7)....	54.6
Sullivan County Railroad (see Note 8).....	100
Vermont Valley Railroad (see Note 9).....	99.9
York Harbor & Beach Railroad Company.....	89
Montpelier & Wells River Railroad (see Note 8).....	99.9
Barre Railroad Company (see note 8).....	99.5

Joint, direct control—

Troy Union Railroad (see Note 10).....	25
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- NOTE 1. 97% owned by the Northern R. R., a leased road; 2.8% owned by Boston & Maine R. R.
2. Owned by Fitchburg R. R., a leased road.
3. The Concord & Montreal R. R. and Northern R. R., both leased roads, each own 50%.
4. Owned by the Concord & Montreal R. R., a leased road.
5. Owned by the Connecticut and Passumpsic Rivers R. R. Co., a leased road.
6. Owned by the Northern R. R., a leased road.
7. 53.4% owned by the Boston & Lowell R. R. Corporation, a leased road; 1.2% owned by the Boston & Maine R. R.

- NOTE 8. Owned by the Vermont Valley R. R. (See Note 9.)
9. Owned by the Connecticut River R. R., a leased road.
10. Other parties to agreement for joint control: New York Central & Hudson River Railroad, 50%; Delaware & Hudson Company, 25%.

FACTS PERTAINING TO CONTROL.

Date of last meeting of stockholders for election of directors: October 8, 1913.

Date of last closing of stock books before end of year for which this report is made: October 1, 1913.

Total number of stockholders of record: 8,171.

Each share of stock has one vote.

No issue of securities has contingent voting rights, or special privileges in the election of directors.

Other corporation or corporations that had sole control of the respondent on June 30, 1914: Boston Railroad Holding Company, established by purchase of a majority of capital stock. Control was sole, direct.

The extent of control: 52.9%.

ROAD OPERATED—ENTIRE LINE.

Class 1. (Line owned.)

Main Lines.

TERMINI.

		Miles.	Class Total.
Boston & Maine Railroad:			
Portland Division (via Dover)	..... Boston, Mass.	111.11	
Portland Division (via Portsmouth)	..... Boston, Mass.	104.90	
Portland Division (Conway Section)	..... Jewett, Me.	73.37	
Southern Division	..... North Cambridge, Mass.	95.69	
Worcester, Nashua & Portland Division	..... Worcester, Mass.	139.47	
	..... Westbrooke, Me.		
Total main lines	.....	524.54	

Branch Lines.

Medford	..... Medford Junction, Mass.	2.00	
South Reading	..... Peabody, Mass.	8.12	
Newburyport	..... Wakefield Junction, Mass.	30.37	
Methuen	..... Lawrence, Mass.	3.75	
Georgetown	..... Bradford, Mass.	5.87	
West Amesbury	..... Newton Junction, N. H.	4.45	
Dover & Winnepesaukee	..... Dover, N. H.	29.00	
Somersworth	..... Rollinsford, N. H.	2.75	
Orchard Beach	..... Old Orchard, Me.	3.27	
Charlestown	..... East Somerville, Mass.	1.09	
Saugus	..... Everett Junction, Mass.	9.55	
Chelsea Beach	..... Revere Junction, Mass.	3.34	
Swampscott	..... Swampscott, Mass.	3.96	
Marblehead	..... Salem, Mass.	3.52	
Lawrence	..... Salem, Mass.	19.89	
Gloucester	..... Beverly, Mass.	16.94	
Essex	..... Hamilton and Wenham, Mass.	6.00	
Newburyport City	..... Freight tracks in Newburyport, Mass.	1.97	
Salisbury	..... Salisbury, Mass.	3.79	
Dover	..... Portsmouth, N. H.	10.88	
Wolfeborough	..... Sanbornville, N. H.	12.03	
*Lowell & Lawrence and Lowell & Andover	..... Connections in Lowell, Mass.	.25	

Class
Total.

TERMINI.		Miles.
Class 1—Continued.		
**Electric Street Railway.....	Portsmouth, Rye, and North Hampton, N. H.....	18.10
Total branch lines.....		200.89
Total owned		725.43
Class 2. None.		
Class 3. (Line operated under lease for specified sum.)		
Lowell & Andover Railroad.....	Lowell Junction, Mass.....	8.85
Manchester & Lawrence Railroad.....	Manchester, N. H.....	22.39
Kennebunk & Kennebunkport R. R.....	Kennebunk, Me.....	4.50
Boston & Lowell Railroad.....	Boston, Mass.....	26.27
Mystic Branch	Mystic Junction, Mass.....	2.25
Lexington Branch	Somerville Jct., Mass.....	8.11
Middlesex Central Branch.....	Lexington, Mass.....	11.08
Bedford & Billerica Branch.....	Bedford, Mass.....	7.63
Woburn Branch	Winchester, Mass.....	6.20
Stonham Branch	Montvale, Mass.....	2.50
Lawrence Branch	Wilmington, Mass.....	3.21
Salem & Lowell Branch.....	Tewksbury Jct., Mass.....	16.80
Lowell & Lawrence Branch.....	Lowell, Mass.....	12.42
½ Manchester & Keene Branch.....	Greenfield, N. H.....	14.80
Nashua & Lowell Railroad.....	Lowell, Mass.....	14.50
Stony Brook Railroad.....	North Chelmsford, Mass.....	13.16
Wilton Railroad	Nashua, N. H.....	15.50
Heterborough Railroad	Wilton, N. H.....	10.50
Concord & Montreal Railroad.....	Nashua, N. H.....	181.07
Hooksett Branch	Hooksett, N. H.....	7.59
Mt. Washington Branch.....	Wing Road, N. H.....	20.17
Manchester & North Weare Branch.....	Manchester, N. H.....	24.50
Lake Shore Branch.....	Lakeport, N. H.....	17.28
Wilton & Belmont Branch.....	Belmont Junction, N. H.....	4.17
Whitefield & Jefferson Branch.....	Whitefield Junction, N. H.....	30.58
Waumbek Branch	Cherry Mountain, N. H.....	3.48
Profile & Franconia Notch Branch.....	Bethlehem Junction, N. H.....	12.84
Manchester & Milford Branch.....	Grasmere Junction, N. H.....	18.54
Suncook Valley Extension Branch.....	Pittsfield, N. H.....	4.46

1/2 Manchester & Keene Branch.....	Greenfield, N. H.....	Keene, N. H.....	14.79
Concord & Manchester Electric Branch.....	Concord, N. H.....	Manchester and Penacook, N. H.....	
Nashua & Acton Railroad.....	Nashua, N. H.....	North Acton, Mass.....	28.70
New Boston Railroad.....	Parkers, N. H.....	New Boston, N. H.....	20.12
Concord & Portsmouth Railroad.....	Manchester, N. H.....	Portsmouth, N. H.....	5.19
Suncook Valley Railroad.....	Suncook, N. H.....	Pittsfield, N. H.....	39.87
Pemigewasset Valley Railroad.....	Plymouth, N. H.....	Lincoln, N. H.....	17.41
Franklin & Tilton Railroad.....	Franklin Junction, N. H.....	Tilton, N. H.....	22.93
Northern Railroad.....	Concord, N. H.....	White River Junction, Vt.....	4.95
Bristol Branch.....	Franklin, N. H.....	Bristol, N. H.....	69.50
Concord & Claremont, N. H., Railroad.....	Concord, N. H.....	Claremont Junction, N. H.....	13.41
Hillsboro Branch.....	Contocook, N. H.....	Hillsborough, N. H.....	56.30
Peterboro & Hillsboro Railroad.....	Peterborough, N. H.....	Hillsborough, N. H.....	14.60
Fitchburg Railroad.....	Boston, Mass.....	Fitchburg, Mass.....	18.51
Fitchburg Railroad.....	Greenfield, Mass.....	Rotterdam Junction, Mass.....	49.65
Fitchburg Railroad.....	Vermont state line.....	Troy, N. Y.....	105.25
Fitchburg Railroad.....	South Ashburnham, Mass.....	Bellows Falls, Vt.....	40.30
Hoosac Docks Branch.....	Freight tracks in Boston, Mass.....		53.85
Watertown Branch.....	West Cambridge, Mass.....	Waltham, Mass.....	66
Marlboro Branch.....	South Acton, Mass.....	Marlboro, Mass.....	6.63
Greenville Branch.....	Ayer, Mass.....	Greenville, N. H.....	12.35
Milford Branch.....	Squannacook Junction, Mass.....	Milford, N. H.....	23.64
Ashburnham Branch.....	South Ashburnham, Mass.....	Ashburnham, Mass.....	21.73
Worcester Branch.....	Worcester, Mass.....	Winchenden, Mass.....	2.59
Peterborough Branch.....	Winchendon, Mass.....	Peterborough, N. H.....	35.74
Saratoga Branch.....	Saratoga Junction, N. Y.....	Saratoga, N. Y.....	15.93
Schuylerville Branch.....	Schuylerville Junction, N. Y.....	Schuylerville, N. Y.....	17.50
Vermont & Massachusetts Railroad.....	Fitchburg, Mass.....	Greenfield, Mass.....	8.32
Turners Falls Branch.....	Turners Falls Junction, Vt.....	Turners Falls, Vt.....	55.78
Troy & Bennington Railroad.....	Hoosier Junction, N. Y.....	Vermont state line.....	2.80
Connecticut River Railroad.....	Springfield, Mass.....	Brattleboro, Vt.....	5.04
Chicopee Falls Branch.....	Chicopee Junction, Mass.....	Chicopee Falls, Mass.....	59.65
Easthampton Branch.....	Mt. Tom, Mass.....	Easthampton, Mass.....	2.35
East Deerfield Branch.....	Deerfield Junction, Mass.....	East Deerfield, Mass.....	3.50
Ashuelot Branch.....	Dole Junction, N. H.....	Keene, N. H.....	1.04
Connecticut & Pass. Rivers R. R.....	White River Junction, Vt.....	Canada line.....	21.82
Massawippi Valley Railway.....	Canada line.....	Lennoxville, P. Q.....	110.30
Stanstead Branch.....	Beebe Junction, P. Q.....	Stanstead, P. Q.....	31.95
			3.51
Class 4. (Line operated under contract.)			1,543.51
Horn Pond Branch Railroad.....	Woburn Branch.....	Horn Pond, Woburn, Mass.....	.59

		TERMINI.	Miles.	Class Total.
Class 4—Continued.				
Citizens Ry. Materials Co., Exten. Ports-				
mouth Elect. Ry.		Portsmouth, N. H.	3.41	4.00
Class 5. (Line operated under Trackage Rights.)				
Portland Terminal Co.		Rigby, Me.	4.41	
Portland Terminal Co.		Rigby, Me.	3.84	
Portland Terminal Co.		Westbrook (Gorham line)	7.51	
Portland Terminal Co.		Cumberland Mills	3.80	
New York, New Haven & Hartford R. R.		Concord Junction, Mass.	4.21	
Boston & Albany Railroad.		Connecting track.	.21	
Troy Union Railroad.		Junction to Station.	2.03	
Grand Trunk Railway.		Lennoxville, P. Q.	2.95	
		Sherbrooke, P. Q.		28.96
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Grand total				2,301.90
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Steam roads			2,251.69 miles	
Electric street railways			50.21 miles	
Total			2,301.90 miles	
<hr/>				
ROAD OPERATED—STATE OF NEW HAMPSHIRE.				
Class 1. (Line owned.)				
Main Lines.				
Boston & Maine Railroad:				
Portland Division (via Dover)		Atkinson, N. H.	34.62	
Portland Division (via Portsmouth)		Atlantic	16.08	
Portland Division (Conway Section)		Salmon Falls	70.45	
Worcester, Nashua & Portland Division.		Hollis	58.02	
Total main lines			179.17	
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Branch Lines.				
West Amesbury		Newton Junction	2.32	
Dover and Winnepesaukee.		Dover	29.00	
Somersworth		Rollinsford	2.75	
Dover		Portsmouth	10.88	
Wolfeboro		Sanbornville	12.03	
		Massachusetts state line		
		Alton Bay		
		Somersworth		
		Dover		
		Wolfeboro		

Electric Street Railway.....	Portsmouth	Rye and North Hampton.....	18.10
Total branch lines.....			75.08
Total owned			254.25
Class 2. None.			
Class 3. (Line operated under lease for specified sum.)			
Manchester & Lawrence Railroad.....	Manchester	Massachusetts state line.....	22.39
Boston & Lowell Railroad:			
½ Manchester & Keene Branch.....	Greenfield	Keene	14.80
Nashua & Lowell Railroad.....	South Nashua	Nashua	5.25
Wilton Railroad	Nashua	Wilton	15.50
Peterborough Railroad	Wilton	Greenfield	10.50
Concord & Montreal Railroad.....	Nashua	Groveton	181.07
Hooksett Branch	Hooksett	Bow Junction	7.59
Mt. Washington Branch.....	Wing Road	Base Station.....	20.17
Manchester & North Weare Branch.....	Manchester	Henniker Junction.....	24.50
Lake Shore Branch.....	Lakeport	Alton Bay	17.28
Tilton & Belmont Branch.....	Belmont	Belmont	4.17
Whitefield & Jefferson Branch.....	Whitefield Junction.....	Whitefield Junction	30.58
Waumbek Branch	Cherry Mountain.....	Jefferson	3.48
Profile & Franconia Notch Branch.....	Bethlehem Junction.....	Bethlehem and Profile House	12.84
Manchester & Milford Branch.....	Grasmere Junction	East Milford.....	18.54
Suncook Valley Extension Branch.....	Pittsfield	Center Barnstead	4.46
½ Manchester & Keene Branch.....	Greenfield	Keene	14.79
Concord & Manchester Electric Branch.....	Concord	Manchester and Penacook.....	28.70
Nashua & Acton Railroad.....	Nashua	Massachusetts state line.....	4.98
New Boston Railroad.....	Parkers	New Boston	5.19
Concord & Portsmouth Railroad.....	Manchester	Portsmouth	39.87
Suncook Valley Railroad.....	Suncook	Pittsfield	17.41
Penigewasset Valley Railroad.....	Plymouth	Lincoln	22.93
Franklin & Tilton Railroad.....	Franklin Junction	Tilton	4.95
Northern Railroad	Concord	West Lebanon	69.26
Bristol Branch	Franklin	Bristol	13.41
Concord & Claremont (N. H.) Railroad.....	Concord	Claremont Junction.....	56.30
Hillsboro Branch	Contoocook	Hillsborough	14.60
Peterboro & Hillsboro Branch.....	Peterborough	Hillsborough	18.51
Fitchburg Railroad	Massachusetts state line.....	Cold River	43.09

TERMINI.		Miles.	Class. Total.
Class 3—Continued.			
Fitchburg Railroad:			
Greenville Branch	Massachusetts state line	Greenville	9.58
Milford Branch	Massachusetts state line	Milford	12.17
Peterborough Branch	Massachusetts state line	Peterborough	13.68
Connecticut River Railroad	Hinsdale	Vt. line at Brattleboro	8.86
Ashuelot Branch	Dole Junction	Keene	21.82
Total leased			813.22
Class 4. (Line operated under contract.)			
Citizens Ry. Materials Co.	Portsmouth Plains	Greenland Parade	3.41
Total operated (steam 1020.67, electric 50.21)			3.41
Total operated (steam 1020.67, electric 50.21)			1,070.88
*Total length, .37 miles, of which .25 mile is owned and .12 mile is leased.			
**Total length, 21.51 miles, of which 3.41 miles is leased.			
†Includes Lowell & Lawrence and Lowell & Andover connection in Lowell, 0.12 miles.			

*Total length, .37 miles, of which .25 mile is owned and .12 mile is leased.

**Total length, 21.51 miles, of which 3.41 miles is leased.

†Includes Lowell & Lawrence and Lowell & Andover connection in Lowell, 0.12 miles.

OUTSIDE OPERATIONS AND MISCELLANEOUS INVESTMENTS.

Outside operations—Owned:

Portsmouth Electric Railway, passenger on electric street railway, New Hampshire, 18.10 miles owned, 3.41 miles Class 4.
 Steamer Mount Washington, passenger and freight, on Lake Winnepesaukee, New Hampshire.
 Portsmouth Bridge, toll bridge, New Hampshire and Maine.
 Dover Point Bridge, toll bridge, New Hampshire.
 Dining cars, dining car service, Maine, New Hampshire, Massachusetts, Vermont, and New York.

Outside operations—Leased:

Concord and Manchester Electric Branch, electric street railway, New Hampshire.
 Steamer Lady of the Lake, passenger and freight on Lake Memphremagog, Vermont.
 Wells River bridge, toll bridge, Vermont, and New Hampshire.
 Pemigewasset Valley Stage Line, stage line, New Hampshire.
 Mystic Elevator, grain elevator, Massachusetts.
 Hoosac Elevator, grain elevator, Massachusetts.
 Rotterdam Stock Yard, stock yard service, New York.
 Union Market Stock Yard, stock yard service, Massachusetts.
 West Lebanon Stock Yard, stock yard service, New Hampshire.
 Hoosac Tunnel Dock, freight storage, Massachusetts.
 Coal Discharging Plants, discharging coal, Massachusetts.
 Icing Plant, icing cars, Massachusetts.

Miscellaneous investments:

Real estate, Massachusetts, New Hampshire and Vermont	Investment.
Track material loaned, New Hampshire.....	\$72,491.82
	127,686.42

Total	\$200,178.24
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ROAD OR TRACKS ACQUIRED THROUGH LEASE OR OTHER AGREEMENT.

Boston & Lowell Railroad Corporation.....	111.27 miles
Date of lease, June 22, 1887. Term, 99 years, from April 1, 1887. Provisions: for 7% on capital stock until January 1, 1897, 8% thereafter. Interest on funded debt, and organization expenses.	
Connecticut & Passumpsic Rivers Railroad Company....	110.30
Date of lease, June 1, 1887. Term, 99 years, from January 1, 1887. Provisions: for 5% on capital stock first ten years, 6% thereafter. Interest on funded debt, and organization expenses.	
Massawippi Valley Railway.....	35.46
Date of lease December 27, 1871. Term, 999 years, from July 1, 1870. Provisions: for 5% on \$400,000 capital stock first ten years, 6% thereafter, and interest on funded debt.	
Nashua & Lowell Railroad Corporation.....	14.50
Date of lease, November 10, 1880. Term, 99 years, from October 1, 1880. Provisions: for \$65,000 per annum. Increased April 1, 1887, to \$73,000, which includes \$1,000 organization expenses.	
Northern Railroad	82.91
Date of lease, December 30, 1889. Term, 99 years from January 1, 1890. Provisions: for 5% on capital stock first seven and one-half years, 6% thereafter. Interest on funded debt, and organization expenses. Assumes interest on first mortgage bonds of C. & C. and P. & H. Railroads.	
Concord & Claremont (N. H.) Railroad.....	70.90
Included in Northern Railroad lease.	
Peterborough & Hillsborough Railroad.....	18.51
Included in Northern Railroad lease.	
Peterborough Railroad	10.50
Date of lease, April 1, 1893. Term, 93 years, from April 1, 1893. Provisions: for 4% on capital stock, and organization expenses.	

Stony Brook Railroad Corporation.....	13.16 miles
Date of lease, September 30, 1884. Term, 99 years, from January 1, 1890. Provisions: for 6½% on capital stock to January 1, 1890, 7% thereafter, and organization expenses.	
Wilton Railroad Company.....	15.50
Date of lease, February 1, 1884. Term, 99 years, from October 1, 1883. Provisions: for 7% on capital stock to January 1, 1891, 8½% thereafter.	
Concord & Montreal Railroad (includes Nashua & Acton Railroad, 20.12 miles).....	388.29
Date of lease, June 29, 1895. Term, 91 years, from April 1, 1895. Provisions: for 7% on capital stock, interest on funded debt, and organization expenses.	
Concord & Portsmouth Railroad.....	39.87
Date of lease, May 26, 1862. Term, 99 years, from January 1, 1862. Provisions: for 7% on capital stock, and organization expenses.	
Franklin & Tilton Railroad.....	4.95
Date of lease, October 8, 1895. Term, 91 years, from April 1, 1895. Provisions: for \$1.00 per annum, and organization expenses.	
New Boston Railroad Company.....	5.19
Date of lease, June 21, 1893. Term, 99 years, from June 19, 1893. Provisions: for 4% on cost of construction not to exceed \$70,000.	
Pemigewasset Valley Railroad.....	22.93
Date of lease, March 31, 1883. Term, 100 years, from February 1, 1882. Provisions: for 6% on capital stock, and organization expenses.	
Suncook Valley Railroad.....	17.41
Date of lease, October 15, 1913. Term, 2 years, from January 1, 1914. Provisions: for 3% on capital stock, and organization expenses.	
Connecticut River Railroad Co.....	88.36
Date of lease, January 1, 1893. Term, 99 years, from January 1, 1893. Provisions: for 10% on capital stock, interest on funded debt, and organization expenses.	
Fitchburg Railroad	394.14
Date of lease, June 30, 1900. Term, 99 years, from July 1, 1900. Provisions: for 5% on preferred stock, 1% on common stock, interest on funded debt, and organization expenses.	
Troy & Bennington Railroad Company.....	5.04
Date of lease, October 12, 1872. Term, perpetuity, from August 1, 1877. Provisions: for the sum of \$15,400 per annum.	
Vermont & Massachusetts Railroad Company.....	58.58
Date of lease, January 1, 1874. Term, 999 years, from January 1, 1874. Provisions: for 4% on capital stock first two years, 5% next two years, 6% thereafter, interest on funded debt, and organization expenses. Further agrees to assume 20% of the bonds at maturity and 20% of each subsequent re-issue.	
Horn Pond Branch Railroad, owned by Boston Ice Co., used as sidetrack for its business.....	.59
Kennebunk & Kennebunkport Railroad Company.....	4.50
Date of lease, June 18, 1883. Term, 99 years, from May 15, 1883. Provisions: for 4½% on capital stock.	
Lowell & Andover Railroad Company.....	8.85
Date of lease, October 18, 1875. Term, 99 years, from December 1, 1874. Provisions: for 7% per annum on cost of construction not to exceed \$750,000.	
Manchester & Lawrence Railroad.....	22.39
Date of lease, June 1, 1887. Term, 50 years, from September 1, 1887. Provisions: for 10% on capital stock, interest on funded debt, and organization expenses.	

Citizens Railway Materials Company..... 3.41 miles
 Date of lease, October 8, 1912. Term, 3 years from
 October 8, 1912. Provisions: for cost of putting
 road into condition for operation, not to exceed \$1,000.

CAPITAL STOCK.

Kind.	Number of shares authorized.	Total par value authorized.	Total par value outstanding.
Common	395,205.253	\$39,520,525.30	\$39,505,100.00
Common, scrip.....	.....	.....	290.70
Preferred	31,498.000	3,149,800.00	3,149,800.00
Total	426,703.253	\$42,670,325.30	\$42,655,190.70

PURPOSE OF THE ISSUE.

		Amt. Realized.
Issued for cash.....	292,435 shares	\$35,154,780.51
Issued for other property.....	134,114 shares	

FUNDED

Designation of Bond or Obligation.	Term.		Total par value. authorized.	Total par value. outstanding.
	Date of issue.	Date of maturity.		
Mortgage bonds:				
Portsmouth, Great Falls & Conway R. R. (First mortgage)	June 1 1877	June 1 1937	\$1,000,000	\$1,000,000
Worcester, Nashua & Rochester R. R. (First mortgage)	Jan. 1 1890	Jan. 1 1930	735,000	735,000
Worcester, Nashua & Rochester R. R. (First mortgage)	Oct. 1 1894	Oct. 1 1934	380,000	380,000
Worcester, Nashua & Rochester R. R. (First mortgage)	Jan. 1 1906	Jan. 1 1935	150,000	150,000
Plain bonds:				
Boston & Maine R. R.	Nov. 1 1901	Nov. 1 1921	1,000,000	1,000,000
Boston & Maine R. R.	Jan. 1 1903	Jan. 1 1923	2,000,000	2,000,000
Boston & Maine R. R.	Feb. 2 1905	Feb. 2 1925	500,000	500,000
Boston & Maine R. R.	Sept. 1 1906	Sept. 1 1926	10,000,000	10,000,000
Improvements bonds:				
Boston & Maine R. R.	Feb. 1 1887	Feb. 1 1937	2,000,000	1,919,000
Boston & Maine R. R.	Aug. 1 1892	Aug. 1 1942	2,500,000	2,500,000
Boston & Maine R. R.	Jan. 1 1894	Jan. 1 1944	6,000,000	6,000,000
Boston & Maine R. R.	Jan. 2 1900	Jan. 2 1950	5,454,700	5,454,000
Boston & Maine R. R.	Apr. 1 1909	Apr. 1 1929	11,700,000	11,700,000
			<u>\$43,419,700</u>	<u>\$43,338,000</u>

RECAPITULATION OF

Kind of Bond or Obligation.	Total par value. outstanding.	Total par value held in sinking or other funds.
Mortgage bonds	\$2,265,000	.....
Plain bonds	41,073,000	\$564,000
Total	<u>\$43,338,000</u>	<u>\$564,000</u>

DEBT.

Total par value held in sinking or other funds.	Total par value not held.	Interest.				
		Rate.	When payable.	Amount accrued during the year.	Amount paid during the year.	
.....	\$1,000,000	4 ½ %	June 1 Dec. 1	1 1	\$45,000.00	\$44,280.00
.....	735,000	4 %	Jan. 1 July 1	1 1	29,400.00	29,400.00
.....	380,000	4 %	April 1 Oct. 1	1 1	15,200.00	15,160.00
.....	150,000	4 %	Jan. 1 July 1	1 1	6,000.00	6,000.00
\$25,000	975,000	3 ½ %	May 1 Nov. 1	1 1	34,160.00	34,212.50
105,000	1,895,000	3 ½ %	Jan. 1 July 1	1 1	66,360.00	66,360.00
33,000	467,000	3 ½ %	Feb. 2 Aug. 2	2 2	16,362.50	16,380.00
68,000	9,932,000	4 %	Mar. 1 Sept. 1	1 1	397,880.00	397,480.00
127,000	1,792,000	4 %	Feb. 1 Aug. 1	1 1	71,700.00	71,700.00
7,000	2,493,000	4 %	Feb. 1 Aug. 1	1 1	99,920.00	100,100.00
77,000	5,923,000	4 ½ %	Aug. 1 July 1	1 1	266,737.50	267,570.00
22,000	5,432,000	3 %	Jan. 1 July 1	1 1	162,960.00	162,795.00
100,000	11,600,000	4 ½ %	April 1 Oct. 1	1 1	524,025.00	522,427.50
					<u>\$1,735,705.00</u>	<u>\$1,733,865.00</u>

FUNDED DEBT.

Total par value not held by respondent.	<i>Interest.</i>	
	Amount accrued during the year. Charged to income.	Amount paid during the year.
\$2,265,000	\$95,600	\$94,800
40,509,000	1,640,105	1,639,025
<u>\$42,774,000</u>	<u>\$1,735,705</u>	<u>\$1,733,865</u>

PURPOSE OF THE ISSUE.

	Total par value outstanding.	Total cash realized.
Issued for cash	\$18,965,000	\$19,154,893.44
Issued for additions and betterments	3,919,000	3,892,000.00
Issued for acquisition of securities..	5,454,000	5,454,000.00
Issued for refundment of securities..	15,000,000	15,022,650.16
Total	\$43,338,000	\$43,523,543.60

RECAPITULATION OF CAPITALIZATION.

Account.	Total par value outstanding.	Assignment to railways.	Miles.	Amount per Mile.
Capital stock	\$42,655,190.70	\$42,655,190.70	725.43	\$58,800
Funded debt	43,338,000.00	43,338,000.00	725.43	59,741
Total	\$85,993,190.70	\$85,993,190.70		\$118,541

PREMIUM ON SECURITIES.

Class of security:	
Capital stock—common	\$6,501,620.14
Funded debt, plain bonds, due 1926 and 1929.....	334,451.12

SECURITY FOR FUNDED DEBT.

Road or tracks mortgaged:

Portsmouth, Great Falls & Conway Railroad (first mortgage bonds) from Jewett, Me., to North Conway, N. H., 72.86 miles; amount of mortgage per mile of line, \$13,725; other property mortgaged, none.

Worcester, Nashua & Rochester Railroad (first mortgage bonds) from Worcester, Mass., to Nashua, N. H., 46.09 miles; amount of mortgage per mile of line, \$27,446; other property mortgaged, equipment formerly owned by W. N. & R. R. R.

EXPENDITURES FOR ADDITIONS AND BETTERMENTS DURING THE YEAR—ENTIRE LINE.

Account.	From cash or other working assets.	Property retired or converted.	Total.
Right of way and station grounds	\$68,837.87	\$36,175.61	\$32,662.26
Real estate	8,775.10	15,986.64	7,211.54
Widening cuts and fills.....	629.05	.....	629.05
Grade reductions and changes of line	99.93	.....	99.93
Tunnel improvements.....	2.69	.....	2.69
Bridges, trestles and culverts	22,880.27	.....	22,880.27
Increased weight of rail.....	12,512.72	.....	12,512.72
Improved frogs and switches	559.39	.....	559.39
Track fastenings and ap- purtenances	35,768.74	.....	35,768.74
Additional main tracks (Note A)	344,011.30	.....	344,011.30
Sidings and spur tracks.....	9,925.46	13,691.64	3,766.18
Terminal yards.....	5,549.31	.....	5,549.31
Fencing right of way.....	1,853.91	.....	1,853.91
Elimination of grade crossings	283,284.66	.....	283,284.66
Interlocking apparatus	34,883.34	.....	34,883.34
Block and other signal ap- paratus (Note B).....	.....	20,152.32	20,152.32

Account.	From cash or other working assets.	Property retired or converted.	Total.
Telegraph and telephone lines	\$5,906.24		\$5,906.24
Station buildings and fixtures	59,981.28	\$7,100.00	52,881.28
Roadway machinery and tools	1,036.74		1,036.74
Shops, enginehouses and turntables	496,068.21		496,068.21
Shop machinery and tools	730,499.66		730,499.66
Water and fuel stations	46,703.93		46,703.93
Dock and wharf property		228,224.39	228,224.39
Equipment	1,283,786.69	597,487.47	686,299.22
Other additions and better- ments	5,868.62	13,718.85	7,850.23
Total	\$3,459,425.11	\$932,536.92	\$2,526,888.19

NOTE A. These tracks are located at Lynn, Mass., and were not complete for operation June 30, 1914.

NOTE B. Adjustment of previous year's account, the work having been deferred and the material returned to stock.

ROAD AND EQUIPMENT.

Investment Since June 30, 1907—Entire Line.

Account.	Expenditures / for additions and better- ments during the year.	Total expenditures, July 1, 1907, to June 30, 1913.	Total expenditures, July 1, 1907, to June 30, 1914.
Road:			
Engineering	\$11,069.94	\$11,790.81	\$22,860.75
Right of way and station grounds	32,069.56	67,188.98	35,119.42
Real estate	7,223.39	316,826.72	309,603.33
Grading	47,681.78	277,605.78	325,287.56
Bridges, trestles and cul- verts	171,358.33	588,745.20	760,103.53
Ties	1,122.65	118,282.71	117,160.06
Rails	22,548.45	262,408.65	284,957.10
Frogs and switches	238.45	36,861.92	36,623.47
Track fastenings and other materials	40,500.88	26,423.87	66,924.75
Ballast	25,714.01	36,719.53	62,433.54
Track laying and surfacing	9,529.52	160,026.40	169,555.92
Roadway tools	1,036.74	16,584.92	17,621.66
Fencing right of way	313.15	2,776.14	3,089.29
Crossings and signs	299,488.46	806,060.11	1,105,548.57
Interlocking and other sig- nal apparatus	85,564.21	655,772.19	741,336.40
Telephone and telegraph lines	5,906.24	794.49	5,111.75
Station buildings and fixtures	57,339.03	290,408.29	347,747.32
Shops, enginehouses and turntables	485,852.61	1,080,343.72	1,566,196.33
Shop machinery and tools	730,499.66	182,914.16	913,413.82
Water stations	8,764.97	40,623.87	49,388.84
Fuel stations	26,759.32	19,488.24	46,247.56
Dock and wharf property	209,255.00	130,121.98	339,376.98
Electric light plants		3,266.34	3,266.34
Electric power plants		182.28	182.28
Electric power transmission	4,254.85		4,254.85
Miscellaneous structures	7,823.25	8,493.81	670.56
Cost of road purchased		7,698,448.63	7,698,448.63
Total	\$1,840,588.97	\$12,442,948.84	\$14,283,537.81

Account.	Expenditures for additions and better- ments during the year.	Total expenditures, July 1, 1907, to June 30, 1913.	Total expenditures, July 1, 1907, to June 30, 1914.
Equipment:			
Steam locomotives.....	\$133,090.22	\$5,240,674.12	\$5,107,583.90
Electric locomotives.....		245,188.61	245,188.61
Passenger train cars.....	70,992.57	3,858,188.77	3,929,181.34
Freight train cars.....	647,400.36	7,635,118.18	8,282,518.54
Work equipment	100,996.51	297,233.19	398,229.70
Total	\$686,299.22	\$17,276,402.87	\$17,962,702.09
General expenditures:			
Law expenses		\$2,799.69	\$2,799.69
Recapitulation:			
Road	\$1,840,588.97	\$12,442,948.84	\$14,283,537.81
Equipment	686,299.22	17,276,402.87	17,962,702.09
General expenditures.....		2,799.69	2,799.69
Total—entire line.....	\$2,526,888.19	\$29,722,151.40	\$32,249,039.59

SUMMARY OF ROAD AND EQUIPMENT.

Investment to June 30, 1907:	
Road	\$45,641,171.01
Equipment	12,763,629.73
Investment since June 30, 1907.....	32,249,039.59
Total	\$90,653,840.33
Reserve for accrued depreciation—Cr.....	4,969,160.06
Net total	\$85,684,680.27
Cost per mile of line (725.43 miles).....	118,115.41

INCOME ACCOUNT.

Railway operating income:	
Rail operations—revenues	\$47,413,905.73
Rail operations—expenses	38,296,678.73
Net revenue, rail operations.....	\$9,117,227.00
Auxiliary operations—revenues	\$741,272.58
Auxiliary operations—expenses	555,032.94
Net revenue, auxiliary operations.....	186,239.64
Net railway operating revenue.....	\$9,303,466.64
Railway tax accruals.....	2,059,016.83
Railway operating income.....	\$7,244,449.81
Other income:	
Income from lease of road.....	\$18,000.00
Joint facility rent income.....	81,724.74
Miscellaneous rent income.....	205,716.85
Net profit from miscellaneous physical property	4,367.63
Dividend income	895,633.30
Income from funded securities.....	1,118.00
Income from unfunded securities and ac- counts	269,663.62
Income from sinking and other reserve funds	25,778.60
Release of premiums on funded debt....	23,725.50
Miscellaneous income.....	16,060.18
Total other income.....	\$1,541,788.42
Gross income	\$8,786,238.23

Deductions from gross income:

Deductions for lease of other roads.....	\$5,487,628.95
Hire of equipment.....	1,535,403.89
Joint facility rent deductions.....	150,630.06
Miscellaneous rent deductions.....	10,700.62
Interest deductions for funded debt.....	1,735,705.00
Interest deductions for unfunded debt...	1,562,964.79
Amortization of discount on funded debt.	274,108.33

Total deductions \$10,757,141.64

Net loss \$1,970,903.41

Disposition of net income:

Appropriations of income to sinking fund..... 73,838.60

Balance for year to debit of profit and loss..... \$2,044,742.01

PROFIT AND LOSS STATEMENT.

DR.

Balance (at beginning of fiscal period).....	\$14,295.64
Debit balance transferred from income account.....	2,044,742.01
Loss on retired road and equipment.....	70,058.50
Delayed income debits (loss on sale of M. C. Rd. stock)....	1,136,898.54
*Miscellaneous debits	358,176.62
Total	\$3,624,171.31

CR.

Profit on road and equipment sold.....	\$460,600.00
Miscellaneous credits (adjustment of old account).....	10,194.97
Balance debit (at end of fiscal period).....	3,153,376.34
Total	\$3,624,171.31

OPERATING REVENUES—ENTIRE LINE AND STATE.

Revenue from transportation:

Freight revenue	\$27,866,098.31
Passenger revenue	\$15,851,615.36
Excess baggage revenue.....	116,402.73
Parlor and chair car revenue.....	588.50
Mail revenue	492,479.35
Express revenue	1,218,779.36
Milk revenue (on passenger trains).....	445,925.63
Other passenger train revenue.....	127,183.31

Total passenger service train revenue..... \$18,252,974.24

Switching revenue 370,038.62

Special service train revenue..... 79,684.45

Miscellaneous transportation revenue..... 46,298.96

Total revenue from transportation..... \$46,615,094.58

Revenue from operations other than transportation:

Station and train privileges.....	\$71,700.79
Parcel-room receipts	29,886.80
Storage—freight	84,366.10
Storage—baggage	16,207.74

*Premium on bonds sold in 1906 and 1909, transferred to credit of Profit and Loss in June, 1911.....

\$405,627.62

Less proportion applying to 1912 and 1913.....

47,451.00

\$358,176.62

Correction made by Order of Interstate Commerce Commission.

Car service	\$308,582.10
Telegraph and telephone service.....	19,095.66
Rents of buildings and other property.....	134,463.57
Miscellaneous	129,064.36
Total revenue from operations other than transportation	\$793,367.12
Joint facilities revenues—Cr.....	5,444.03
Total operating revenues.....	\$47,413,905.73

SECURITIES OWNED.

Stocks.

(Not held in sinking or other funds.)

Name of Corporation. and Security.	Unpledged.		Dividends Declared.	
	Total par value.	Cost or book value.	Rate.	Amount.
Stocks of proprietary, affiliated and con- trolled companies held for invest- ment:				
Railway companies— active—				
Fitchburg R. R. Co., common stock	\$5,551,400	\$5,488,394.75	...	.....
Maine Central R. R. Co., common stock, 159,600 shares sold April 1, 1914.....	.....	.....	6%	\$718,204.50
York Harbor & Beach R. R. Co., common stock (\$50)	267,000	256,830.00	...	.....
Suncook Valley R. R. Par value, \$63,- 060; owned by Concord & Mon- treal R. R.	.....	.....	3%	1,891.80
Pemigewasset Valley R. R. ....	.....	.....	6%	2,286.00
Par value, \$38,- 100; owned by Concord & Mon- treal R. R.	.....	.....
New Boston R. R. Par value, \$10,- 000; owned by Concord & Mon- treal R. R.	.....	.....	4%	400.00
Peterborough R. R. Par value, \$33,- 100; owned by Boston & Low- ell R. R.	.....	.....	4%	1,324.00
Vermont Valley R. R. ....	.....	.....	10%	99,000.00
Par value, \$990,- 000; owned by Connecticut River R. R.	.....	.....
Mt. Washington Ry. Co. ....	.....	.....	2%	4,230.00
Par value, \$211,- 500; owned by Concord & Mon- treal R. R.	.....	.....

Name of Corporation. and Security.	Unpledged.		Dividends Declared.	
	Total par value.	Cost or book value.	Rate.	Amount.
Railway companies— inactive—				
Portsmouth Horse R. R.	\$3,100†	.....	...	.....
Other than railway companies — ac- tive—				
Woodsville Aqueduct Co. ....	.....	.....	...	.....
Par value, \$10,- 000; owned by Concord & Mon- treal R. R.				
Portsmouth Bridge Proprietors of Wells River Bridge....	\$40,000 1,100	\$4,000.00 1,090.00	......	..........
Total	\$5,862,600	\$5,750,314.75		\$827,336.30

SECURITIES OWNED.

Funded Debt.

(Not held in sinking or other funds.)

Name of Corporation and Security.			Interest Accrued.	
	Total par value.	Cost or book value.	Rate.	Amount.
Funded debt of propri- etary, affiliated, and controlled companies held for investment:				
Other than railway companies—active—				
Woodsville Aqueduct Co.	4%	\$400.00
Par value, \$10,000; owned by Concord & Montreal R. R.				
Railway companies— active—				
Conway Electric Street Ry. Co.				
Par value, \$65,- 000, owned by F. R. R.	5%	500.00
Par value \$35,- 000, owned by F. R. R.	4%	.....
Total				\$900.00

†This stock represents a franchise purchased under which the Portsmouth Electric Branch was constructed. The cost of the franchise is included in the construction account of this branch.

SECURITIES OWNED.

Marketable—Stocks.

Name of Corporation and Security.	Par value.	Cost or book value.	Dividends Declared.	
			Rate.	Amount.
Railway companies — active—				
St. Johnsbury & Lake Champlain Railroad Co. (par \$50)....	\$43,550	\$4,517.06	...	.....
Montreal & Atlantic Railway Co.	37,300	3,000.00	...	.....
Concord & Claremont (N. H.) Railroad..	11,700	4,890.00	...	.....
Boston & Lowell R. R. Corporation	561,900	1,198,820.28	8%	\$44,952.00
The Concord & Montreal R. R.	333,500	533,600.00	7%	23,345.00
Other than railway companies—active—				
*Woodsville Aqueduct Co.	5,450	.....	...	.....
Total	\$993,400	\$1,744,827.34		\$68,297.00

SECURITIES OWNED.

Marketable—Funded Debt.

Name of Corporation and Security.	Total par value.	Cost or book value.	Interest Accrued.	
			Rate.	Amount.
Railway companies — active—				
St. Johnsbury & Lake Champlain Railroad Co.	\$432,000	\$432,000.00	5%	None
Montreal & Atlantic Railway Co.	108,000	108,000.00	5%	None
**Maine Railway Co. (5 yr. notes)....	9,472,000	9,522,000.00	5%	\$140,751.39
Other than railway companies—active—				
Woodsville Aqueduct Co. (\$50)	5,540	5,618.50	4%	218.00
Total	\$10,017,450	\$10,067,618.50		\$140,969.39

SUMMARY OF SECURITIES OWNED.

(Not held in sinking or other funds.)

Kind of Security.	Par value.	Dividends or interest.
Stocks:		
Stocks of railway companies—active....	\$6,806,350	\$895,633.30
Stocks of railway companies—inactive..	3,100	.....
Stocks of other than railway companies—		
Active	46,550	.....
Total	\$6,856,000	\$895,633.30

*Stock acquired with bonds purchased.

**These notes are dated May 1, 1914, and the interest as stated here is the amount accrued to date of sale. Total amount of notes received.....	\$12,162,000
Of which there were sold at various dates prior to June 30	2,690,000
	\$9,472,000

Funded debt:

Funded debt of railway companies— active	\$540,000	\$500.00
Funded debt of other than railway com- panies—active	5,450	618.00
Total	\$545,450	\$1,118.00

Miscellaneous securities:

Miscellaneous securities of railway com- panies—active	\$9,472,000	\$140,751.39
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SINKING AND OTHER FUNDS.

Income and disbursements during the year.

Sinking and redemption funds:

For redemption of Boston & Maine Railroad improvement bonds—		
Cash appropriations to fund.....		\$48,060.00
Income to fund from investments.....		25,778.60
Total		\$73,838.60

Assets on June 30, 1914.

Name of Fund and Security.	Securities in Fund.	
	Par value.	Cost or book value.
Sinking fund for redemption of B. & M. R. R. Improvement Bonds—		
3½% bonds of B. & M. R. R., due 1921	\$25,000.00	\$22,659.89
3½% bonds of B. & M. R. R., due 1923	105,000.00	100,114.41
3½% bonds of B. & M. R. R., due 1925	33,000.00	30,670.60
4% bonds of B. & M. R. R., due 1926..	68,000.00	63,955.10
4½% bonds of B. & M. R. R., due 1929	100,000.00	95,629.46
4% Imp. bonds of B. & M. R. R., due 1937	127,000.00	126,083.23
4% bonds of B. & M. R. R., due 1942..	7,000.00	4,818.61
4½% bonds of B. & M. R. R., due 1944	77,000.00	85,829.01
3% bonds of B. & M. R. R., due 1950..	22,000.00	16,940.00
3½% bonds of N. Y., N. H. & H. R. R. Co., due 1954.....	30,000.00	24,130.00
4% bonds of N. Y., N. H. & H. R. R. Co., due 1956.....	40,000.00	37,333.46
4% bonds of Port. Union Ry. Station Co., due 1927.....	45,000.00	45,301.56
4% bonds of the Port. Union Ry. Sta- tion Co., due 1929.....	20,000.00	20,075.55
4½% bonds of M. C. R. R. Co., due 1917	31,000.00	32,290.35
4½% bonds of Portland & Ogdensburg Ry., due 1928.....	18,000.00	18,931.50
4% bonds of European & North Ameri- can Ry., due 1933.....	8,000.00	9,198.24
3½% bonds of The Concord & Montreal R. R., due 1920.....	300,000.00	299,070.96
3½% bonds of Conn. River R. R. Co., due 1923	17,000.00	17,255.00
4% bonds of Fitchburg R. R. Co., due 1915	15,000.00	14,969.17
3½% bonds of Fitchburg R. R. Co., due 1921	125,000.00	125,959.50
Conn. River R. R. Co., stock (31 shares)	3,100.00	7,734.50
Fitchburg R. R. Co., preferred stock (259 shares)	25,900.00	37,037.00
	\$1,242,000.00	\$1,235,987.10
Cash in fund.....		7,719.87
Total		\$1,243,706.97

RESERVES.

Reserves from income or surplus:

Invested in sinking and redemption funds—

For redemption of B. & M. R. R. improvement bonds	\$1,243,706.97
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ADVANCES TO PROPRIETARY, AFFILIATED AND CONTROLLED COMPANIES.

Advances for construction, equipment, and betterments—

Connecticut & Passumpsic Rivers Railroad Co.....	\$878,057.11
Northern Railroad	596,611.79
Lowell & Andover Railroad.....	183,160.57
Manchester & Lawrence Railroad.....	144,744.93
Nashua & Lowell Railroad Corporation.....	338,539.42
Stony Brook Railroad Corporation.....	116,247.36
Boston & Lowell Railroad Corporation.....	157,459.36

Total	\$2,414,820.54
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*Temporary advances for various purposes—

Fitchburg Railroad Co.....	\$1,184,744.95
Boston & Lowell Railroad.....	210,635.70
Connecticut River Railroad.....	502,655.92
Wilton Railroad	36,508.17
Peterborough Railroad	25,881.56
Concord & Montreal Railroad.....	185,437.30

Total	\$2,145,863.60
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Special deposits:

For Eastern R. R. bonds and coupons outstanding.....	\$8,265.00
For payment of Conn. River notes, due June 2, 1914..	10,000.00

Total	\$18,265.00
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OPERATING EXPENSES—ENTIRE LINE.

Account.

Maintenance of way and structures:

Superintendence	\$184,781.59
Ballast	47,167.65
Ties	1,359,276.27
Rails	321,352.50
Other track material.....	303,220.47
Roadway and track.....	2,107,918.31
Removal of snow, sand, and ice.....	186,294.81
Tunnels	17,372.04
Bridges, trestles, and culverts.....	466,645.32
Over and under grade crossings.....	72,352.31
Grade crossings, fences, cattle guards, and signs.....	124,496.83
Snow and sand fences and snowsheds.....	397.75
Signals and interlocking plants.....	242,823.19
Telegraph and telephone lines.....	33,659.88
Electric power transmission.....	20,003.88
Buildings, fixtures, and grounds.....	837,435.87
Docks and wharves.....	41,443.29
Roadway tools and supplies.....	68,255.06
Injuries to persons.....	50,072.63
Stationery and printing.....	10,544.62
Other expenses	1,839.72
Maintaining joint tracks, yards, and other facilities—Dr.	125,834.91
Maintaining joint tracks, yards, and other facilities—Cr.	77,358.44

Total—maintenance of way and structures.....	\$6,545,830.46
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*The Boston & Maine Railroad to be reimbursed through sales of securities of the various companies upon request of Boston & Maine Railroad.

Maintenance of equipment:

Superintendence	\$169,955.37
Steam locomotives—repairs	2,632,362.20
Steam locomotives—renewals	17,544.30
Steam locomotives—depreciation	338,776.33
Electric locomotives—repairs	30,063.91
Electric locomotives—depreciation	7,358.76
Passenger-train cars—repairs	786,268.59
Passenger-train cars—renewals	9,192.15
Passenger-train cars—depreciation	156,650.68
Freight-train cars—repairs	2,990,221.30
Freight-train cars—renewals	7,704.36
Freight-train cars—depreciation	365,232.49
Work equipment—repairs	32,421.89
Work equipment—renewals	1.99
Work equipment—depreciation	11,862.32
Shop machinery and tools.....	100,542.32
Injuries to persons.....	52,150.66
Stationery and printing.....	12,299.49
Other expenses	295.83
Maintaining joint equipment at terminals—Dr.....	20,856.00
Maintaining joint equipment at terminals—Cr.....	7,889.94

Total—maintenance of equipment..... \$7,733,871.00

Traffic expenses:

Superintendence	\$182,545.71
Outside agencies	82,465.99
Advertising	92,442.69
Traffic associations	5,710.00
Fast freight lines.....	39,256.07
Industrial and immigration bureaus.....	5,730.36
Stationery and printing.....	56,808.22
Other expenses	99.21

Total—traffic expenses

\$465,058.25

Transportation expenses:

Superintendence	\$305,801.04
Dispatching trains	125,605.20
Station employees	4,012,093.27
Weighing and car-service associations.....	11,352.73
Station supplies and expenses.....	301,450.72
Yardmasters and their clerks.....	454,420.31
Yard conductors and brakemen.....	1,305,735.79
Yard switch and signal tenders.....	199,980.99
Yard supplies and expenses.....	26,117.14
Yard enginemen	661,634.21
Enginehouse expenses—yard	190,731.01
Fuel for yard locomotives.....	698,073.97
Water for yard locomotives.....	27,171.53
Lubricants for yard locomotives.....	7,627.90
Other supplies for yard locomotives.....	11,123.77
Operating joint yards and terminals—Dr.....	532,726.16
Operating joint yards and terminals—Cr.....	255,366.12
Motormen	22,583.72
Road enginemen	2,408,594.87
Enginehouse expenses—road	650,693.06
Fuel for road locomotives.....	4,231,527.81
Water for road locomotives.....	185,126.18
Lubricants for road locomotives.....	56,510.47
Other supplies for road locomotives.....	77,772.89
Purchased power	122,859.43
Road trainmen	2,932,122.84
Train supplies and expenses.....	579,782.74
Interlockers and block and other signals—operation...	543,757.34
Crossing flagmen and gatemen.....	483,454.65
Drawbridge operation	44,856.64
Clearing wrecks	48,331.01
Telegraph and telephone—operation.....	135,843.69
Stationery and printing.....	166,612.69
Other expenses	11,097.56
Loss and damage—freight	415,696.13

Loss and damage—baggage.....	\$4,308.12
Damage to property.....	115,005.66
Damage to stock on right of way.....	4,831.40
Injuries to persons.....	383,284.47
Operating joint tracks and facilities—Dr.....	11,039.75
Operating joint tracks and facilities—Cr.....	62,621.98
Total—transportation expenses	\$22,189,350.76
General expenses:	
Salaries and expenses of general officers.....	\$107,351.68
Salaries and expenses of clerks and attendants.....	520,231.36
General office supplies and expenses.....	12,822.35
Law expenses	192,658.10
Insurance	211,656.21
Pensions	106,846.96
Stationery and printing.....	41,039.61
Valuation expenses	44,521.31
Other expenses	116,153.99
General administration joint tracks, yards, and terminals—Dr.....	9,478.32
General administration joint tracks, yards and terminals—Cr.....	191.63
Total—general expenses	\$1,362,568.26
Recapitulation of expenses:	
Maintenance of way and structures.....	\$6,545,830.46
Maintenance of equipment.....	7,733,871.00
Traffic expenses	465,058.25
Transportation expenses	22,189,350.76
General expenses	1,362,568.26
Total—operating expenses	\$38,296,678.73
Ratio of operating expenses to operating revenues, per cent	80.77

SUMMARY OF REVENUES AND EXPENSES OF OUTSIDE OPERATIONS AND MISCELLANEOUS INVESTMENTS.

Designation.	Revenues.	Expenses.	Net revenue or deficit.
Outside operations:			
Boat lines	\$19,733.25	\$20,397.82	\$664.57
Electric railways	262,193.73	174,059.89	88,133.84
Dining and special car service	120,223.35	136,398.86	16,175.51
Grain elevators	132,412.06	101,291.03	31,121.03
Stock yards	1,956.80	1,451.74	505.06
Public toll-bridge service.....	26,404.73	7,841.20	18,563.53
Miscellaneous:			
Coal discharging plants.....	143,767.40	86,285.86	57,481.54
Freight storage plants.....	24,846.28	8,185.81	16,660.47
Stage line	859.99	1,135.91	275.92
Icing plant	8,874.99	17,984.82	9,109.83
Total	\$741,272.58	\$555,032.94	\$186,239.64

Miscellaneous investments:

Real estate (see note):

Track material loaned..... \$4,367.63 \$4,367.63

NOTE.—No specific return can be made covering taxes assessed on this real estate, much of which is in the State of New Hampshire, where the railroad property is valued as a whole.

RENTS RECEIVABLE.

Joint Facilities.

Joint tracks, and lessees:

Main line between Worcester and Sterling Junction, Mass., N. Y., N. H. & H. R. R. (11.94 miles).....	\$25,000.00
Main line between Shelburne Junction and Shelburne Falls, Mass., N. Y., N. H. & H. R. R. (4.67 miles).....	7,600.00
Main line between Troy and Eagle Bridge, N. Y., Delaware & Hudson Co. (22.81 miles).....	15,000.00

BOSTON & MAINE RAILROAD.

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Trackage of sundry passenger trains between No. Adams and Williamstown, Mass., N. Y., N. H. & H. R. R. (4.63 miles)	\$1,536.77
Trackage of sundry freight trains between Springfield and Northampton, Mass., N. Y., N. H. & H. R. R. (17.05 miles)	5,684.05

Total of joint tracks.....	\$54,820.82
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Joint yards and terminals, and lessees:

Athol, Mass., Boston & Albany R. R.....	\$300.00
Baldwinville, Mass., Boston & Albany R. R.....	21.24
Barber, Mass., N. Y., N. H. & H. R. R.....	10.68
Fitchburg, Mass., N. Y., N. H. & H. R. R.....	800.00
Lowell, Mass., N. Y., N. H. & H. R. R.....	1,789.00
Newport, Vt., Canadian Pacific Railway.....	706.69
North Acton, Mass., N. Y., N. H. & H. R. R.....	30.00
North Adams, Mass., Boston & Albany R. R.....	550.00
Northampton, Mass., N. Y., N. H. & H. R. R.....	733.33
Rotterdam Junction, N. Y. C. & H. R. R. R.....	12,938.93
Sherbrooke, P. Q., Quebec Central Railway.....	180.00
St. Johnsbury, Vt., St. J. & L. C. R. R.....	1,200.00
Sterling Junction, Mass., N. Y., N. H. & H. R. R.....	454.67
Ware, Mass., Boston & Albany R. R.....	9.95
Worcester, Mass., Boston & Albany R. R.....	1,151.17
Worcester, Mass., N. Y., N. H. & H. R. R.....	6,028.26

Total—joint yards	\$26,903.92
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Grand Total	\$81,724.74
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MISCELLANEOUS RENTS.

Land, and lessees:

Charlestown, Mass., Boston Ice Co.....	\$1,500.00
Charlestown, Mass., G. I. Jones.....	1,600.00
Charlestown, Mass., W. A. Taft, Tr.....	1,500.00
Charlestown, Mass., J. O. Armour.....	2,000.00
Charlestown, Mass., D. Whiting & Son.....	1,750.00
Charlestown, Mass., Portland Stone Ware Co.....	1,500.00
Fitchburg, Mass., C. A. Cross & Co.....	1,000.00
Somerville, Mass., Simpson Bros. Co.....	1,200.00
Troy, N. Y., Peterson & Packer Coal Co.....	1,000.00

Buildings, and lessees:

Lawrence, Mass., J. Cahn	4,500.00
Lawrence, Mass., N. Morris & Co.....	1,500.00
Lawrence, Mass., American Express Co.....	1,200.00
Lawrence, Mass., Stanley Grain Co.....	2,700.00
Lowell, Mass., E. A. Simpson.....	4,750.00
Lynn, Mass., Collins Hardware Co.....	1,500.00
Lynn, Mass., W. and E. W. La Croix.....	1,500.00
Lynn, Mass., T. E. Gregory Co.....	1,500.00
Worcester, Mass., Scranton Coal Co.....	1,500.00
Worcester, Mass., W. F. Peel.....	1,030.00
Sidetracks, various	5,180.45
Miscellaneous, various	165,806.40

Total	\$205,716.85
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MISCELLANEOUS INCOME.

Sale of grass and other sundries.....	\$16,060.18
Income from lease of road.....	18,000.00

RENTS PAYABLE.

Joint Facilities.

Joint tracks, and lessors:

Between Troy and Albany, N. Y. (5.45 miles) Delaware & Hudson Co.	\$219.00
Between Lennoxville and Sherbrooke, P. Q. (2.95 miles) Grand Trunk Railway	1,224.96
At Winchendon, Mass. (0.21 miles), Boston & Albany R. R.	700.08
Between Concord Junction and Acton Junction, Mass. (4.21 miles), N. Y., N. H. & H. R. R.	3,082.20
Total—joint tracks	\$5,226.24

Yards and terminals, and lessors:

Albany, N. Y., Delaware & Hudson Co.	\$116.13
Albany, N. Y., N. Y. C. & H. R. R. R.	50.81
Belchertown, Mass., Central Vermont Railway Co.	122.21
Bellows Falls, Vt., Rutland R. R.	1,142.04
Bellows Falls, Vt., Vermont Valley R. R.	122.96
Claremont Junction, N. H., Sullivan County R. R.	88.00
Concord Junction, Mass., N. Y., N. H. & H. R. R.	200.00
Groveton, N. H., Grand Trunk Railway	439.50
Portland, Me., Portland Terminal Co.	102,532.29
Rotterdam Junction, N. Y., N. Y. C. & H. R. R. R.	416.54
Sherbrooke, P. Q., Grand Trunk Railway	900.00
Springfield, Mass., Boston & Albany R. R.	13,200.00
Troy, N. Y., Troy Union R. R.	8,857.08
Worcester, Mass., Boston & Albany R. R.	13,558.23
South Worcester, Mass., N. Y., N. H. & H. R. R.	3,658.03

Total—yards and terminals..... \$145,403.82

Grand total \$150,630.06

Deductions for Lease of Other Roads.

Road Leased.	Guar- anteed interest on bonds.	Guar- anteed dividends on stock.	Cash.	Total.
Fitchburg		\$943,000.00	\$1,082,777.22	\$2,025,777.22
Concord & Montreal..		577,948.00	295,074.60	873,022.60
Boston & Lowell....			888,435.73	888,435.73
Connecticut River....		323,330.00	224,176.50	547,506.50
Connecticut & Pas- sumpsic River			243,562.45	243,562.45
Vermont & Massachu- setts			250,485.23	250,485.23
Northern			226,039.17	226,039.17
Manchester & Lawrence	\$10,960.00		102,311.99	113,271.99
Nashua & Lowell....			73,951.64	73,951.64
Lowell & Andover....			55,239.37	55,239.37
Pemigewasset Valley..			32,790.00	32,790.00
Concord & Portsmouth			25,000.00	25,000.00
Massawippi Valley...			24,000.00	24,000.00
Stony Brook.....			23,091.06	23,091.06
Wilton			20,445.24	20,445.24
Peterborough			15,834.75	15,834.75
Troy & Bennington...			15,400.00	15,400.00
Suncook Valley			10,551.00	10,551.00
Kennebunk & Kenne- bunkport			2,925.00	2,925.00
New Boston.....			2,800.00	2,800.00
Newport & Richford (sublet to M. & A. Ry.)			17,500.00	17,500.00
Total	\$10,960.00	\$1,844,278.00	\$3,632,390.95	\$5,487,628.95

Miscellaneous Rent Deductions.

Land, and lessors:	
McVille & Stillwater, Delaware & Hudson Co.....	\$5,000.00
Lowell, Mass., Proprietors of locks and canals on Merrimack River	3,409.36
Bellows Falls, Vt., Rutland Railroad.....	810.00
Springfield, Mass., Hampden Park Association.....	734.88
Troy, N. Y., New York Central Railroad.....	165.00
Sundries:	
Various locations, various lessors.....	581.38
Total	<u>\$10,700.62</u>

HIRE OF EQUIPMENT.

Equipment Leased.

Rents accrued receivable:	
Locomotives, St. Johnsbury & Lake Champlain Railroad, lessee (12 units).....	\$12,748.96
Passenger cars, St. Johnsbury & Lake Champlain R. R., lessee (13 units).....	3,910.27
Company's cars, St. Johnsbury & Lake Champlain R. R., lessee (13 units)	1,254.79
Total (38 units).....	<u>\$17,914.02</u>

EQUIPMENT INTERCHANGED.

	Locomotive or car days.	Rate.	Locomotive or car miles.	Rate.	Total compensation.
Accrued on equipment borrowed:					
Passenger locomotives	1,376	\$4.50 to \$25.00	14,191	6c	\$12,152.85
Freight locomotives	.....	.....	6,776,195	1½-5c	210,102.33
Work locomotives	.....	.....	1,468,444	.6c-1c	3,121,368.67
Passenger train cars	6,935,560	45c and various	.....	.....	254.58
Freight train cars	93	50c to \$4.00	.....	.....	.....
Work cars	.....	.....	.....	.....	.....
Total	6,937,029	.....	8,258,830	.....	\$3,343,878.43
Accrued on equipment loaned:					
Passenger locomotives	3,694	\$5-\$8	6,126	3c-6c	22,470.98
Freight locomotives	.....	.....	.....	.....	.....
Work locomotives	.....	.....	.....	.....	.....
Passenger train cars	3,276	\$4-\$8	11,334,994	1½-5c	315,828.40
Freight train cars	3,644,904	45c and various	3,982,957	.6c-1c	1,653,647.04
Work cars	27,740	various	.....	.....	20,112.70
Total	3,679,614	.....	15,324,077	.....	\$2,012,059.12

Private Cars.

Cars Used.	Days.	Miles.	Rate.	Amount.
Freight .....	.....	13,780,342	.6c-1c	\$106,576.98
Freight	24,059	.....		10,729.90
Passenger, Pullman.....	.....	5,142,680		104,191.72
Total	24,059	18,923,022		\$221,498.60

RECAPITULATION OF HIRE OF EQUIPMENT.

Account.	Amount receivable.	Amount payable.
Equipment leased	\$17,914.02	.....
Equipment interchanged	2,012,059.12	\$3,343,878.43
Private cars .....	.....	221,498.60
Total	\$2,029,973.14	\$3,565,377.03
Balance (as shown in income account) ..	.....	\$1,535,403.89

RAILWAY TAX ACCRUALS.

	Ad Valorem Tax.		Specific Tax.				Internal revenue U. S. Government.	Total.
	On the value of real and personal property.	On the value of stocks or bonds; or on valuation based on earnings, dividends, or other results of operation.	On stocks, bonds, loans, etc.	On gross earnings, revenue, or dividends.	On traffic or some physical quality of property operated, or on privilege.	On property owned, not used in operation, and miscellaneous.		
Massachusetts	\$626,719.87	\$213,814.42	.....	.....	.....	\$118,006.37	.....	\$958,540.66
New Hampshire	679,681.95	.....	.....	.....	.....	38,753.38	.....	718,435.33
Maine	2,852.44	.....	.....	\$181,317.19	.....	2,451.39	.....	186,621.02
Vermont	79,721.56	.....	\$210.00	.....	.....	1,514.25	.....	81,445.81
New York	55,655.49	.....	377.00	1,580.42	.....	.....	.....	65,129.63
Canada	1,415.70	.....	.....	.....	\$1,030.00	.....	.....	2,445.70
United States	.....	.....	.....	.....	.....	.....	\$46,398.68	46,398.68
Total	\$1,446,047.01	\$221,331.14	\$587.00	\$182,897.61	\$1,030.00	\$160,725.39	\$46,398.68	\$2,059,016.83

IMPORTANT CHANGES DURING THE YEAR.

The dock property at East Boston was sold to the Port Directors of the City of Boston for the sum of \$725,000.

The lease of the Suncook Valley Railroad, which expired on January 1, 1914, was extended for a term of two years to January 1, 1916, at the same rate, being \$10,551.00 per annum, or 3% upon the outstanding capital stock, and continuing the allowance for organization expenses of \$300.00 per annum.

In April, 1914, this company disposed of its entire holdings of Maine Central Railroad stock, 159,601 shares, receiving in exchange therefor \$12,162,000, 5 year 5% notes of the Maine Railway Cos. due April 1, 1919, \$3,000,000 temporary note of the Maine Central Railroad Co. (paid April 18, 1914), \$99.75 in cash, or a total of \$15,162,099.75. The sale resulted in a loss to this company of \$1,136,898.54, which was charged to the Profit and Loss account. Two shares of the capital stock of the York Harbor & Beach Railroad were bought September 16, 1913, at \$25.00 a share.

One year 5% coupon notes of the company of a par value of \$10,000,000.00 matured on February 3, 1914, and one year 6% coupon notes of a par value of \$17,000,000.00 matured on June 2, 1914, making a total of \$27,000,000.00. Holders of the first mentioned notes were requested to extend them to June 2, 1914, on the basis of interest paid in advance at 6% per annum, plus a banker's commission of $\frac{1}{4}$ of 1%, equivalent to $6\frac{3}{4}$ % per annum. At the close of business on June 1, 1914, \$8,815,000.00 of these notes had been extended. On June 2, the holders of all these notes (\$27,000,000.00) were given the option of extending them to March 2, 1915, on the basis of 6% per annum in interest payable in advance, or of extending 60% of their face value on the same terms and accepting in settlement of the balance of 40%, five year 5% coupon gold notes of the Maine Railways Companies at par. At the close of business June 30, 1914, these notes to the amount of \$24,354,000.00 had been taken up, on account of which Maine Railway Companies' notes to the amount of \$2,690,000.00 had been issued in exchange, and the balance of \$21,664,000.00 had been extended.

COMPARATIVE GENERAL BALANCE SHEET.

June 30, 1913.	Assets.	June 30, 1914.
	Property investment:	
	Road and equipment—	
	Investment to June 30, 1907—	
\$45,641,171.01	Road	\$45,641,171.01
12,763,629.73	Equipment	12,763,629.73
<u>\$58,404,800.74</u>		<u>\$58,404,800.74</u>
	Investment since June 30, 1907—	
\$12,442,948.84	Road	\$14,283,537.81
17,276,402.87	Equipment	17,962,702.09
2,799.69	General expenditures	2,799.69
<u>\$29,722,151.40</u>		<u>\$32,249,039.59</u>
\$88,126,952.14		\$90,653,840.33
4,182,211.58	Reserve for accrued depreciation, Cr.	4,969,160.06
<u>\$83,944,740.56</u>	Total	<u>\$85,684,680.27</u>
	Securities—	
	Securities of proprietary, affiliated, and controlled companies—unpledged—	
\$22,049,263.04	Stocks	\$5,750,314.75
	Other investments—	
	Advances to proprietary, affiliated, and controlled companies for construction, equipment, and betterments	\$2,414,820.54
\$2,207,573.16		
214,571.77	Miscellaneous investment—	
	Physical property	200,178.24
<u>\$2,422,144.93</u>	Total	<u>\$2,614,998.78</u>

		Working assets:	
\$4,898,223.44	Cash	\$3,510,835.74	
		Marketable securities—	
\$1,744,827.34	Stocks	\$1,744,827.34	
545,618.50	Funded debt	545,618.50	
.....	Miscellaneous	9,522,000.00	
\$2,290,445.84		\$11,812,445.84	
2,307,013.58	Loans and bills receivable.....	1,013,605.89	
112,855.21	Traffic and car-service balances due from other companies	144,022.38	
1,860,929.69	Net balance due from agents and conductors	1,881,452.89	
2,301,231.16	Miscellaneous accounts receivable....	1,853,182.63	
4,655,189.35	Materials and supplies.....	5,702,134.63	
\$18,425,888.27	Total	\$25,917,680.00	
		Accrued income not due:	
\$612.54	Unmatured interest, dividends, and rents receivable	\$118,658.86	
		Deferred debit items:	
\$2,098,767.21	Temporary advances to proprietary, affiliated, and controlled companies..	\$2,145,863.60	
7,553.08	Working funds	7,820.10	
19,285.65	Other advances	2,460.70	
\$2,125,605.94		\$2,156,144.40	
96,621.75	Rents and insurance paid in advance..	105,860.75	
277,625.00	Unextinguished discount on debt.....	.....
8,265.00	Special deposits	18,265.00	
\$1,169,868.37	Cash and securities in sinking and redemption funds	1,243,706.97	
1,288,167.02	Other deferred debit items.....	2,280,075.74	
\$4,966,153.08	Total	\$5,804,052.86	
		Profit and loss:	
.....	Balance	\$3,153,376.34	
.....	Less appropriated surplus (see liabilities)	1,435,048.18	
.....		\$1,718,328.16	
\$131,808,802.42	Grand total	\$127,608,713.68	
<i>Liabilities</i>			
June 30, 1913.		June 30, 1914.	
		Stock:	
\$39,505,390.70	Common stock not held by company...	\$39,505,390.70	
3,149,800.00	Preferred stock not held by company..	3,149,800.00	
\$42,655,190.70		\$42,655,190.70	
6,501,620.14	Premiums realized on capital stock....	6,501,620.14	
\$49,156,810.84	Total	\$49,156,810.84	
		Mortgage, bonded, and secured debt:	
\$2,265,000.00	Funded debt—		
	Mortgage bonds, not held by company	\$2,265,000.00	
.....	Plain bonds, debentures, and notes, held by company in sinking funds	\$564,000.00	
.....	Plain bonds, debentures, and notes, not held by company.....	40,509,000.00	
\$41,073,000.00		\$41,073,000.00	
\$43,338,000.00	Total	\$43,338,000.00	

Working liabilities:	
\$27,000,000.00	Loans and bills payable..... \$24,310,000.00
1,598,992.22	Traffic and car-service balances due to other companies 1,548,298.54
3,465,628.33	Audited vouchers and wages unpaid.. 3,180,950.54
691,616.89	Miscellaneous accounts payable..... 577,416.29
1,496,446.04	Matured interest, dividends, and rents unpaid 1,551,585.76
6,100.21	Matured mortgage, bonded and secured debt unpaid 6,100.21
<u>\$34,258,783.69</u>	<u>Total \$31,174,351.34</u>
Accrued liabilities not due:	
\$1,111,300.07	Unmatured interest, dividends, and rents payable \$814,509.83
603,301.55	Taxes accrued 599,008.19
<u>\$1,714,601.62</u>	<u>Total \$1,413,518.02</u>
Deferred credit items:	
.....	Unextinguished premiums on outstanding funded debt \$334,451.12
\$1,993,692.33	Other deferred credit items..... 2,191,582.36
<u>1,993,692.33</u>	<u>..... \$2,526,033.48</u>
Appropriated surplus:	
\$191,341.21	Additions to property since June 30, 1907, through income..... \$191,341.21
1,169,868.37	Reserves from income or surplus— Invested in sinking and redemption funds 1,243,706.97
<u>\$1,361,209.58</u>	<u>Total *\$1,435,048.18</u>
Profit and loss:	
<u>14,295.64</u>	<u>Balance</u>
<u>\$131,808,802.42</u>	<u>Grand total \$127,608,713.68</u>

EMPLOYEES AND SALARIES—ENTIRE LINE.

Class.	Number on June 30.	Total number of days worked.	Total yearly compensation.	Average daily compensation.
General officers.....	16	5,437	\$170,547.61	\$31.37
Other officers.....	98	40,867	306,778.59	7.51
General office clerks....	1,305	547,140	1,345,964.74	2.46
Station agents.....	729	263,811	697,950.29	2.65
Other station men.....	5,065	1,653,803	3,764,134.44	2.28
Enginemen	1,444	448,603	2,133,120.61	4.76
Firemen	1,289	470,240	1,290,465.48	2.74
Conductors	960	336,142	1,433,224.26	4.26
Other trainmen.....	3,164	903,058	2,929,015.72	3.24
Machinists	911	277,110	822,787.22	2.97
Carpenters	645	174,493	512,647.65	2.94
Other shopmen.....	3,968	1,316,116	3,119,378.02	2.37
Section foremen.....	596	188,546	557,113.25	2.95
Other trackmen	3,606	1,160,542	2,159,380.69	1.86
Switch tenders, crossing tenders, and watchmen	1,783	695,329	1,274,801.23	1.83
Telegraph operators and dispatchers	537	144,983	372,751.10	2.57
Employees—account floating equipment.....	30	4,176	6,263.83	1.50

*Deducted from profit and loss debit balances. See assets.

Class.	Number on June 30.	Total number of days worked.	Total yearly compen- sation.	Average daily compen- sation.
All other employees and laborers	1,393	572,309	\$1,165,824.52	\$2.04
Total (including "General Officers")...	27,539	9,202,705	\$24,062,149.25	\$2.61
Less "General Officers"	16	5,437	170,547.61	....
Total (excluding "General Officers")...	27,523	9,197,268	\$23,891,601.64	\$2.60
Distribution of above:				
Maintenance of way and structures	4,842	1,694,225	\$3,700,566.43	\$2.18
Maintenance of equipment	4,401	1,365,191	3,397,335.16	2.49
Traffic expenses.....	234	70,203	262,189.23	3.73
Transportation expenses	16,723	5,707,044	15,806,183.77	2.77
General expenses.....	848	243,292	625,824.10	2.57
Outside operations.....	491	122,750	270,050.56	2.20
Total (including "General Officers")	27,539	9,202,705	\$24,062,149.25	\$2.61
Less "General Officers"	16	5,437	170,547.61	.....
Total (excluding "General Officers")	27,523	9,197,268	\$23,891,601.64	\$2.60

TRAFFIC AND MILEAGE STATISTICS—ENTIRE LINE.

Passenger traffic:

Number of passengers carried earning revenue.....	47,032,535
Number of passengers carried one mile	896,081,331
Number of passengers carried one mile per mile of road	397,959
Average distance carried, miles.....	19.05
Total passenger revenue.....	\$15,851,615.36
Average amount received from each passenger.....	.33704
Average receipts per passenger per mile.....	.01769
Total passenger service train revenue.....	18,252,974.27
Passenger service train revenue per mile of road...	8,106.34
Passenger service train revenue per train-mile	1.54584

Freight traffic:

Number of tons carried of freight earning revenue..	24,752,884
Number of tons carried one mile.....	2,635,138,719
Number of tons carried one mile per mile of road..	1,170,294
Average distance haul of one ton, miles.....	106.46
Total freight revenue.....	\$27,866,098.31
Average amount received for each ton of freight....	1.12577
Average receipts per ton, per mile.....	.01057
Freight revenue per mile of road.....	12,375.64
Freight revenue per train-mile.....	3.32480

Total traffic:

Operating revenues	\$47,413,905.73
Operating revenues per mile of road.....	21,057.03
Operating revenues per train-mile	2.36523
Operating expenses	38,296,678.73
Operating expenses per mile of road.....	17,007.97
Operating expenses per train-mile	1.91042
Net operating revenue	9,117,227.00
Net operating revenue per mile of road.....	4,049.06
Average number of passengers per car-mile	22

Average number of passengers per train-mile	76
Average number of passenger cars per train-mile ..	4 97
Average number of tons of freight per loaded car-mile	15.85
Average number of tons of freight per train-mile...	314.41
Average number of freight cars per train-mile.....	27.63
Average number of loaded cars per train-mile.....	19.83
Average number of empty cars per train-mile.....	6.83
Average mileage operated during year.....	2,251.69
Locomotive mileage:	
Revenue service—	
Freight locomotive-miles	9,633,383
Passenger locomotive-miles	11,954,377
Mixed locomotive miles.....	241,629
Special locomotive-miles	97,241
Switching locomotive-miles	6,498,562
Total revenue locomotive mileage.....	28,425,192
Nonrevenue service locomotive-miles.....	689,271
Car mileage:	
Revenue service—	
Freight car-miles—	
Loaded	166,210,611
Empty	57,242,546
Caboose	8,136,892
Total freight car-miles.....	231,590,049
Passenger car-miles—	
Passenger	35,119,706
Sleeping, parlor, and observation	6,431,524
Other passenger-train cars.....	17,120,259
Total passenger-car miles.....	58,671,489
Special car-miles—	
Freight—loaded	41,211
Freight—empty	267
Caboose	3,872
Passenger	226,206
Sleeping, parlor, and observation	32,363
Other passenger-train cars.....	197,683
Total special car-miles.....	501,602
Total revenue car mileage.....	290,763,140
Nonrevenue service car miles.....	3,913,805
Train mileage:	
Revenue service—	
Freight train-miles	8,142,071
Passenger train-miles	11,568,580
Mixed train-miles	239,222
Special train-miles	96,358
Total revenue train mileage.....	20,046,231
Nonrevenue service train-miles.....	549,319

FREIGHT TRAFFIC MOVEMENT—ENTIRE LINE.

Commodity.	Tons originating on this road.	Tons re- ceived from connecting roads.	Total tons.	Per cent.
Products of agriculture:				
Grain	89,458	1,173,012	1,262,470	5.10
Flour	108,398	332,731	441,129	1.78
Other mill products...	51,269	401,292	452,561	1.83
Hay	49,275	307,864	357,139	1.44
Tobacco	8,209	9,778	17,987	.07
Cotton .....	.....	242,942	242,942	.98
Fruit and vegetables..	198,280	777,834	976,114	3.94
Other products of agri- culture	23,371	33,115	56,486	.23
Total	528,260	3,278,568	3,806,828	15.37
Products of animals:				
Live stock.....	60,155	79,236	139,391	.56
Dressed meats.....	73,380	135,426	208,806	.84
Other packing-house products	67,470	66,133	133,603	.54
Poultry, game and fish	40,821	21,294	62,115	.25
Wool	77,829	70,991	148,820	.60
Hides and leather...	121,693	134,564	256,257	1.04
Other products of ani- mals	42,292	18,243	60,535	.24
Total	483,640	525,887	1,009,527	4.07
Products of mines:				
Anthracite coal.....	.....	1,674,630	1,674,630	6.76
Bituminous coal.....	.....	3,142,780	3,142,780	12.70
Coke	132,965	52,620	185,585	.75
Ores	10,058	42,408	52,466	.21
Stone, sand and other like articles.....	791,664	407,608	1,199,272	4.84
Other products of mines	26,943	78,211	105,154	.42
Total	961,630	5,398,257	6,359,887	25.68
Products of forests:				
Lumber	1,061,009	1,440,450	2,501,459	10.11
Other products of for- ests	529,252	782,537	1,311,789	5.30
Total	1,590,261	2,222,987	3,813,248	15.41
Manufactures:				
Petroleum and other oils .....	.....	257,227	257,227	1.04
Sugar .....	.....	228,649	228,649	.92
Naval stores	21,160	15,340	36,500	.15
Iron, pig and bloom..	72,250	154,084	226,334	.92
Iron and steel rails..	32,255	95,717	127,972	.51
Other castings and ma- chinery	249,830	190,594	440,424	1.78
Bar and sheet metal..	33,189	88,392	121,581	.49
Cement, brick and lime	406,638	352,246	758,884	3.07
Agricultural implements	44,010	11,656	55,666	.23
Wagons, carriages, tools, etc.	25,780	20,332	46,112	.19
Wines, liquors and beers	144,190	41,348	185,538	.76
Household goods and furniture	73,942	32,105	106,047	.44
Other manufactures...	1,464,304	899,184	2,363,488	9.54
Total	2,567,548	2,386,874	4,954,422	20.04
Merchandise	986,486	1,048,217	2,034,703	8.22
Miscellaneous	1,722,638	1,051,631	2,774,269	11.21
Total tonnage.....	8,840,463	15,912,421	24,752,884	100.00

DESCRIPTION OF EQUIPMENT—ENTIRE LINE.

Item.	Number on June 30, 1913.	Added during year.	Re- tired during year.	Number on June 30, 1914.	Number fitted with Train brake.	Auto- matic Coupler.
Locomotives — owned or leased:						
Passenger (includes 2 electric).....	487	14	24	477	477	477
Freight (includes 3 electric)	503	12	28	487	487	487
Switching	241	6	3	244	244	244
Total locomotives in service	1,231	32	*55	1,208	1,208	1,208
Less locomotives leased	430	32	....	462	462	462
Total locomotives owned	801	0	55	746	746	746
Cars—owned or leased:						
In passenger serv- ice—						
First-class cars..	1,192	1	8	1,185	1,185	1,185
Second-class cars	10	....	....	10	10	10
Combination cars	250	....	2	248	248	248
Dining cars.....	12	....	....	12	12	12
Parlor cars	9	....	....	9	9	9
Baggage, express and postal cars	384	8	12	380	380	380
Electric street ry.	58	....	....	58	49	0
Other cars in pas- senger service.	102	....	1	101	101	101
Total	2,017	9	23	2,003	1,994	1,945
In freight service—						
Box cars	13,303	506	366	13,443	13,443	13,443
Flat cars	1,741	2	273	1,470	1,470	1,470
Stock cars.....	132	....	4	128	128	128
Coal cars.....	8,303	501	530	8,274	8,274	8,274
Refrigerator cars	350	....	7	343	343	343
Other cars in freight service.	326	....	20	306	273	273
Total	24,155	1,009	1,200	23,694	23,931	23,931
In company's serv- ice—						
Officers' and pay cars	7	....	....	7	7	7
Air brake in- struction	1	....	....	1	1	1
Gravel cars.....	101	....	....	101	100	100
Derrick cars....	62	2	....	64	59	64
Caboose cars....	432	4	11	425	425	425
Other road cars..	761	361	54	1,068	1,048	1,059
Total	1,364	367	65	1,666	1,640	1,656
Total cars in service	27,536	1,385	1,288	27,633	27,565	27,532
Less cars leased...	7,125	1,204	714	7,615	7,556	7,530
Total cars owned	20,411	181	574	20,018	20,009	20,002

*Of the 55 locomotives retired, 23 were cut up, 1 sold to a leased road, and 32 were transferred from one class of service to another.

Item.	Number on June 30, 1913.	Added during year.	Re- tired during year.	Number on June 30, 1914.	Number fitted with Train brake.	Auto- matic Coupler.
Equipment owned or leased not in service:						
Locomotives	12	....	....	12	....	12
Cars in passenger service	13	....	....	13	....	13
Cars in company's service	13	....	....	13	....	13
Total cars.....	26			26		26

MILEAGE.

Mileage of Road Operated.

	Line Owned.		Line under lease.	Line under contract or trackage rights.	Total.
	Main line.	Branches and spurs.			
Entire line:					
Miles of single track.	524.54	200.89	1,543.51	32.96	2,301.90
Miles of second track	203.45	31.98	335.09	20.10	590.62
Miles of third track..	2.56	.....	5.83	.....	8.39
Miles of fourth track.	.....	.....	2.02	.....	2.02
Miles of yard track and sidings	342.95	71.81	937.68	.09	1,352.53
Total (all tracks)..	1,073.50	304.68	2,824.13	53.15	4,255.46
By states:					
Massachusetts	213.23	122.54	446.68	5.01	787.46
New Hampshire.....	179.17	75.08	813.22	3.41	1,070.88
Maine	132.14	3.27	4.50	19.56	159.47
Vermont .....	.....	.....	123.95	.....	123.95
New York.....	.....	.....	119.70	2.03	121.73
Canada .....	.....	.....	35.46	2.95	38.41
Total	524.54	200.89	1,543.51	32.96	2,301.90

Mileage of Line Owned.

	Main line.	Branches and spurs.	Total mileage owned.
Massachusetts	213.23	122.54	335.77
New Hampshire.....	179.17	75.08	254.25
Maine	132.14	3.27	135.41
Total mileage operated*.....	524.54	200.89	725.43

Electric Street Railway mileage included in above as follows:

	Miles owned.	Miles leased, etc.	Total.
Single track.....	18.10	32.11	50.21
Sidings	1.09	2.11	3.20
Total	19.19	34.22	53.41

*All rails are steel except 74.30 miles of iron rails in yard track and sidings. No new line constructed during the year.

ACCIDENTS TO PERSONS—STATE OF NEW HAMPSHIRE.

Resulting from Movements of Trains, Locomotives or Cars.

	Railway Employees.						Other Persons.					
	Train-		Track-		Other	Pas-	Tres-		Not	Tot-		
	men.	men.	em-	ploy-	ees.		pass-	tres-	tres-		pass-	ing.	ing.	al.
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Collisions	1	1	..	..	..	..	..	..	..	..	1	1
Falling from trains, locomotives, or cars.....	..	2	1	..	..	..	..	1	..	..	1	3
Jumping on or off trains, locomotives, or cars....	2	3	..	..	..	..	..	3	1	..	5	4
Struck by trains, locomotives, or cars—												
at highway crossings....	..	..	..	..	..	..	..	..	4	1	4	1
at stations .....	..	..	..	..	..	..	1	..	..	1	1	1
at other points along track .....	..	..	..	..	..	..	12	5	..	..	12	5
Other causes	1	..	..	..	..	..	1	..	..	..	2	..
Total	4	6	1	..	..	..	17	7	4	2	26	15

Also 1 employee killed by causes other than movement of trains, locomotives or cars.

RENEWALS OF RAILS AND TIES.

New Rails Laid During Year.

	Tons.	Weight per yard. (Pounds.)	Average price per ton.
Entire line, steel.....	16,967.46	85 to 100	\$31.10
New Hampshire, steel.....	32.51	85 to 100	31.10

New Ties Laid During Year.

(Entire Line.)

	No.	Average price at distribut- ing point.
Cedar	257,941	\$0.631
Hard pine	1,219,949	.8998
Chestnut and oak	144,382	.578
Hard pine switch (60 ft.).....	77,256	1.423
Total	1,699,528	.729

(New Hampshire.)

Cedar, hard pine, chestnut and oak.....	520,971	\$0.692
Hard pine switch (60 ft.).....	23,724	1.423
Total	544,695	.724

CONSUMPTION OF FUEL BY LOCOMOTIVES—ENTIRE LINE.

Locomotives.	Bituminous coal—tons.	Hard wood cords.	Miles run.*	Av. lbs. mile.
Revenue service:				
Freight	758,514	.....	9,497,386	159.73
Passenger	610,109	55,318	11,914,668	111.70
Mixed	11,543	.....	241,629	95.54
Special	4,947	.....	97,241	101.75
Switching	230,852	53,148	6,498,562	87.39
Nonrevenue service....	32,979	.....	689,209	95.70
Total	1,648,944	108,466	28,938,695	121.45
Average cost at dis- tributing point.....	\$2.86	\$3.06		

CHARACTERISTICS OF ROAD—ENTIRE LINE.

Alignment:

Number of curves, 4,210. Aggregate miles of curve, 810.60; of straight line, 1,412.13.

Profile:

Miles of level line, 365.99.

Ascending grades: number, 1,258; sum of ascents, 33,645 feet; aggregate length, 1,045.10 miles.

Descending grades: number, 1,141; sum of descents, 25,360 feet; aggregate length, 811.64 miles.

BRIDGES, TRESTLES AND TUNNELS.

Bridges—Entire Line.

Kind.	No.	Aggre- gate length, feet.	Mini- mum length, feet.	Maxi- mum length, feet.
Stone	180	4,723	10	324
Iron	758	63,932	10	1,492
Wooden	393	17,969	10	862
Total	1,331	86,624		

Bridges—State of New Hampshire.

Stone	47	1,253	10	324
Iron	237	22,455	10	911
Wooden	302	14,324	10	465
Total	586	38,032		

Trestles.

Entire line	241	40,110	10	2,741
New Hampshire	141	14,669	11	1,302

Tunnels.

Entire line	4	27,612	418	25,081
New Hampshire, none.				

OVERHEAD HIGHWAY CROSSINGS.

Kind.	Entire Line.		New Hampshire.	
	No.	Minimum height above rail.	No.	Minimum height above rail.
Bridges	328	14 ft. 6 in.	69	15 ft. 2 in.
Trestles	131	15 ft. 1 in.	48	15 ft. 9 in.

*Does not include electric locomotives.

OVERHEAD RAILWAY CROSSINGS.

Kind.	Entire Line.		New Hampshire.	
	No.	Minimum height above rail.	No.	Minimum height above rail.
Bridges	13	14 ft. 11 in.	1	18 ft. 1 in.
Trestles	1	16 ft. 1 in.	1	16 ft. 1 in.

Tunnels, minimum height above rail, 14 ft. 6 in.

Gage of track, 4 feet, 8½ inches.

TELEGRAPH—ENTIRE LINE AND STATE OF NEW HAMPSHIRE.

	Entire Line.	New Hampshire.
Miles of line	140.54	110.51
Miles of wire	365.29	196.46
(Owned by Boston & Maine Railroad, Operated by Western Union Telegraph Co.)		
Miles of line	2,084.88	910.12
Miles of wire	13,218.20	4,583.32
(Owned and operated by the Western Union Telegraph Co.)		
Miles of line	235.11	
Miles of wire	597.60	
(Owned by Fitchburg Railroad, Operated by Western Union Telegraph Co.)		
Miles of line	35.46	
Miles of wire	92.00	
(Owned and operated by Great North Western Telegraph Co.)		

BOSTON RAILROAD HOLDING COMPANY.

BOSTON, MASS.

PRINCIPAL OFFICERS.

President, Howard Elliott, Boston, Mass.; Vice-President, James H. Hustis, New Haven, Conn.; Treasurer, George B. Phippen; Clerk of Corporation, Ernest M. Willis; Auditor, William J. Hobbs, Boston, Mass.

DIRECTORS.

Walter C. Baylies, Boston, Mass.; Robert M. Burnett, Charles F. Choate, Jr., Southboro, Mass.; Howard Elliott, Boston, Mass.; James H. Hustis, New Haven, Conn.; William Skinner, Holyoke, Mass.

GENERAL EXHIBIT FOR THE YEAR.

Income:		
Interest on bond	\$37.00	
Interest on bank balances	528.47	
Gross income		\$565.47
Expenses and charges upon income accrued during the year:		
Taxes	\$26,621.44	
Other expenses and charges	2,786.03	
Total expenses and charges upon income.....		29,407.47
Net divisible expenses (deficit)		\$28,842.00

Dividends declared on preferred stock, 4%.....	\$1,091,756.00
Deficit for the year ending June 30, 1914.....	\$1,120,598.00
Deficit June 30, 1913.....	743,721.56
*Net amount debited to profit and loss.....	1,315,134.00
Total deficit June 30, 1914.....	\$3,179,453.56

GENERAL BALANCE SHEET.

Assets.

Cash	\$3,193.23
Boston & Maine R. R. Co. common stock, 219,189 shares	\$27,927,451.68
Boston & Maine R. R. Co., preferred stock, 6,543 shares	1,060,145.00
Boston & Maine R. R. Co., 4% bonds, 1926, \$1,000	922.50
Total	28,988,519.18
Profit and loss balance—deficit.....	3,179,453.56
Total	\$32,171,165.97

Liabilities.

Capital stock, authorized and outstanding:	
Common, 31,065 shares, par value.....	\$3,106,500.00
Preferred, 272,939 shares, par value.....	27,293,900.00
Total	\$30,400,400.00
Advances by N. Y., N. H. & H. R. R. Co.....	1,224,887.97
Accrued preferred stock dividends payable July 10, 1914....	545,878.00
Total	\$32,171,165.97

CAPITAL STOCK.

Number of stockholders, common, 8; preferred, 328.
Number in New Hampshire, preferred, 2.
Total stock held in New Hampshire, \$1,500.00.

*This item represents an adjustment on the books of the company arising by writing down the book value of the common stock of the Boston & Maine R. R. held by this company.

CONCORD & CLAREMONT [N. H.] RAILROAD.

1017 OLD SOUTH BUILDING, BOSTON, MASS.

HISTORY.

See Report of the Public Service Commission of New Hampshire on the Investigation of Railroad Rates, page 275.

PRINCIPAL OFFICERS.

President, Alvah W. Sulloway, Franklin, N. H.; Treasurer, George U. Crocker, Boston, Mass.; Clerk of Corporation, George W. Stone, Andover, N. H.; Assistant Treasurer, Frank J. Sulloway, Franklin, N. H.

DIRECTORS.

Alvah W. Sulloway, Warren F. Daniell, Franklin, N. H.; Augustus E. Scott, Boston, Mass.; George E. Tenney, Claremont, N. H.; Charles H. Fish, Dover, N. H.; Frank J. Sulloway, Franklin, N. H.; Albert S. Wetherell, Exeter, N. H.

GENERAL EXHIBIT FOR THE YEAR.

Rental received from lease of road.....	\$22,500.00
Interest on funded debt.....	22,500.00
Net divisible income .....	.....
Amount of deficit June 30, 1913.....	\$35,439.34
Total deficit June 30, 1914.....	\$35,439.34

GENERAL BALANCE SHEET.

Assets.

Cost of road.....	\$1,131,206.38
Profit and loss balance—deficit.....	35,439.34
Total	\$1,166,645.72

Liabilities.

Capital stock—common	\$412,400.00
Funded debt	500,000.00
Miscellaneous current liabilities	254,245.72
Total	\$1,166,645.72

CAPITALIZATION.

Capital stock, authorized and outstanding:	
Common, 4,124 shares, par value.....	\$412,400.00
Whole number of stockholders, 5; number in New Hampshire, 4.	
Amount of stock held in New Hampshire.....	400,700.00
Funded debt, authorized and outstanding:	
First mortgage bonds, maturing January 1, 1934, 5% par value	\$500,000.00
Interest paid during year.....	22,500.00

RAILROAD OWNED.

Main line, from Concord to Claremont.....	70.90 miles
Length of sidetrack	14.19 miles
Total length of track	85.09 miles

Cities and towns in which the railway is located: Concord, Henniker, Hillsborough, Hopkinton, Newbury, Newport, Sunapee, Sutton, Warren, Bradford, Claremont.

CONCORD & MONTREAL RAILROAD.

CONCORD, N. H.

HISTORY.

See Report of the Public Service Commission of New Hampshire on the Investigation of Railroad Rates, page 262.

PRINCIPAL OFFICERS.

President, Benjamin A. Kimball; Treasurer, John F. Webster; Clerk of Corporation, William M. Chase, Concord, N. H.
(See Boston & Maine Railroad report for other officers.)

DIRECTORS.

Benjamin A. Kimball, Concord, N. H.; Walter M. Parker, Manchester, N. H.; George M. Kimball, Concord, N. H.; Arthur H. Hale, Manchester, N. H.; Benjamin C. White, Concord, N. H.; Frank P. Carpenter, Manchester, N. H.; Sumner Wallace, Rochester, N. H.; William H. Moses, Tilton, N. H.; Elisha R. Brown, Dover, N. H.

GENERAL EXHIBIT FOR THE YEAR.

Rental received from lease of road to the Boston & Maine Railroad		\$873,022.60
Expenses and charges upon income accrued during the year:		
Interest on funded debt	\$276,555.00	
Additions and improvements paid from income	18,519.60	
Total expenses and charges upon income.....		295,074.60
Net divisible income.....		\$577,948.00
Dividends declared:		
12 shares (classes 2 and 3, not entitled to dividends) 7% on \$8,256,400.....		577,948.00
Surplus for year ending June 30, 1914.....		.....
Amount of deficit June 30, 1913.....		\$120,590.81
Total deficit June 30, 1914.....		\$120,590.81

GENERAL BALANCE SHEET.

Assets.

Cost of road and equipment:		
Construction, general	\$13,156,556.25	
Construction, Concord & Manchester Electric Branch.....	453,537.02	
Construction, Concord Street Railway.....	491,501.25	
Construction, Manchester & Keene Railroad.....	318,208.30	
		\$14,419,802.82
Construction, through income.....		\$106,579.06
Electric line and hotel, Mt. Washington.....		\$17,615.98

Capital stocks:

Pemigewasset Valley R. R., 381 shares.....	\$38,100.00
Franklin & Tilton R. R., 1,328 shares	135,877.39
Suncook Valley R. R., 630 3/5 shares.....	63,060.00
Mt. Washington Ry. Co., 2,115 shares.....	211,500.00
New Boston R. R., 240 shares	24,000.00
Nashua & Acton R. R., 3,000 shares.....	300,000.00

Stocks and bonds from Boston, Concord & Montreal R. R.:

Lake Champlain & St. Lawrence Jct. Rail- way, 1,750 shares	\$66,795.31	
Montreal & Atlantic Ry., 640 shares.....	40,000.00	
Woodsville Aqueduct Co., 200 shares.....	8,419.78	
Wells River Bridge Co., 52 shares.....	3,467.50	
		118,682.59
Wells River Bridge Co., account.....		15,000.00

\$906,219.98

Sundry investments:

Land and water privilege, Franklin, N. H.....	\$437,945.24
Pemigewasset Valley Stage line, one-half.....	1,733.35
Fabyan Hotel property.....	178,107.32
Rindge's Wharf, Portsmouth, N. H.....	51,507.72
Walker Wharf, Portsmouth, N. H.....	21,000.00

\$690,293.63

Miscellaneous:

Boston & Maine R. R., lease account.....	\$51,864.83
New Boston R. R., construction.....	3,004.85
Pemigewasset Valley R. R., construction.....	47,370.19
Cash	669.81

\$102,909.68

Profit and loss \$120,590.81

Total assets \$16,364,011.96*Liabilities.*

Capital stock..... \$8,257,600.00

Premiums on capital stock \$790,866.39

Mortgage bonds, B., C. & M. Rd., old, 1865... \$200.00

Mortgage bonds, B., C. & M. Rd., old, 1889... 300.00

\$500.00

Mortgage bonds, C. & M. Rd., 1890-1920..... 5,500,000.00

Debenture bonds, C. & M. Rd., 1897-1920.... \$650,000.00

Debenture bonds, C. & M. Rd., 1899-1920.... 400,000.00

Debenture bonds, C. & M. Rd., 1901-1920.... 473,000.00

1,523,000.00

\$7,023,500.00

Miscellaneous:

Dividend account, B., C. & M. Rd., old.....	\$723.00
Coupon account, B., C. & M. Rd., old.....	428.00
Organization account, B., C. & M. Rd.....	181.83
Addition to property through income.....	106,579.06
Boston & Maine R. R., Concord & Montreal R. R., Im- provement account	184,133.68

2,292,045.57

Total liabilities \$16,364,011.96

PROPERTY ACCOUNT.

Additions to railway:

Extension of tracks..... \$3,997.35

Other additions to railway:		
Derails	\$1,376.32	
Bridges	59,724.37	
Total additions to railway		\$65,098.04
Additions to land and buildings:		
Additional land necessary for operation of railway	\$2,044.59	
Other new buildings necessary for operation of railway	14,311.84	
Total additions to land and buildings		16,356.43
Additions to other permanent property:		
Shop tools	\$288.08	
Crossing and other signals	997.39	
Total additions to other permanent property		1,285.47
Total additions to property accounts		\$82,739.94
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts):		
Land and buildings sold or abandoned	\$4,732.72	
Cattle pass	1,055.00	
Discount on motors charged last year	27.22	
Storage battery abandoned	19,400.00	
Narrow gauge locomotive sold	450.00	
Total deductions from property accounts		25,664.94
Net addition to property accounts for the year		\$57,075.00

CAPITAL STOCK.

Capital stock authorized by law, all classes	\$8,610,000.00
Capital stock authorized by votes of company, all classes (24 shares Class 4 authorized have not been issued)	8,260,000.00
Capital stock issued and outstanding:	
Class 1, 8,000 shares, par value	\$800,000.00
Class 2, 5,404 shares, par value	540,400.00
Class 3, 4,596 shares, par value	459,600.00
Class 4, 64,576 shares, par value	6,457,600.00
Total capital stock, outstanding, 82,576 shares	8,257,600.00
Number of stockholders, all classes, 2,318.	
Number of stockholders in New Hampshire, 1,577.	
Amount of stock held in New Hampshire, all classes	6,345,100.00

FUNDED DEBT.

Description of bonds, Etc.	Rate of interest.	Date of maturity.	Amount outstanding.	Interest paid during year.
First mortgage bonds	4%	June 1, 1920	\$5,500,000.00	\$220,000.00
Debenture bonds	4%	June 1, 1920	650,000.00	26,000.00
Debenture bonds	3½%	June 1, 1920	400,000.00	14,000.00
Debenture bonds	3½%	June 1, 1920	473,000.00	16,555.00
Mortgage bonds, old of Boston, Concord & Mon- treal R. R.		1865 1889	200.00 300.00	..........
Total			\$7,023,500.00	\$276,555.00

RAILROAD OWNED.

Main line (including Concord & Manchester Electric branch, 28.70 miles), 368.17 miles; second track, 35.27; third, 1.35. Total main line, 404.79. Sidings, switches, etc., 165.05. Total single track, 569.84. Whole line in New Hampshire.

GENERAL REMARKS AND EXPLANATIONS.

The Concord & Montreal Railroad is operated by the Boston & Maine Railroad under the lease of June 29, 1895. The Boston & Maine Railroad receives all earnings and pays all expenses of operation, taxes and rentals of leased lines.

CONCORD & PORTSMOUTH RAILROAD.

MANCHESTER, N. H.

HISTORY.

See Report of the Public Service Commission of New Hampshire on the Investigation of Railroad Rates, page 252.

PRINCIPAL OFFICERS.

President, Samuel C. Eastman, Concord, N. H.; Treasurer, William B. Stearns, Manchester, N. H.; Clerk of Corporation, Wallace Hackett, Portsmouth, N. H.

DIRECTORS.

Samuel C. Eastman, Charles R. Walker, Concord, N. H.; Wallace Hackett, Calvin Page, Joshua Winslow Pierce, Portsmouth, N. H.; Walter M. Parker, Manchester, N. H.; Elisha R. Brown, Dover, N. H.

GENERAL EXHIBIT FOR THE YEAR.

Rental received from lease of road.....	\$25,000.00
Refund corporation taxes, 1909, 10, 11, by U. S. Treasury....	595.73
Interest on bank deposit.....	269.97
Gross income	\$25,865.70
Expenses and charges upon income accrued during year:	
Salaries and maintenance of organization..	\$320.00
Printing, advertising, etc.....	25.00
Cash paid B. & M. R. R., refund taxes, 1909, 10, 11, funds to pay same having been furnished by them originally.....	595.73
Total expenses and charges upon income.....	940.73
Net divisible income	\$24,924.97
Dividends declared, 7% on common stock.....	24,500.00
Surplus for year ending June 30, 1914.....	\$424.97
Surplus June 30, 1913.....	7,091.66
Total surplus, June 30, 1914.....	\$7,516.63

GENERAL BALANCE SHEET.

Assets.

Cost of road.....	\$350,000.00
Cash	7,516.63
Total	\$357,516.63

Liabilities.

Capital stock—common	\$350,000.00
Profit and loss balance—surplus.....	7,516.63
Total	\$357,516.63

CAPITAL STOCK.

Common, issued and outstanding:	
5,000 shares, par value.....	\$350,000.00
Whole number of stockholders, 165; number in New Hampshire, 130.	
Amount of stock held in New Hampshire.....	319,600.00

RAILROAD OWNED.

Main line from Manchester to Portsmouth.....	39.87 miles
Length of sidetrack.....	17.29 miles
Total length of track.....	57.16 miles

CONNECTICUT RIVER RAILROAD COMPANY.

SPRINGFIELD, MASS.

PRINCIPAL OFFICERS.

President, Lucius Tuttle, Brookline, Mass.; Treasurer and Clerk of Corporation, George R. Yerrall, Springfield, Mass.

DIRECTORS.

John H. Albin, Concord, N. H.; Edmund P. Kendrick, Springfield, Mass.; Joseph W. Stevens, Greenfield, Mass.; Lucius Tuttle, Brookline, Mass.; William W. McClench, Springfield, Mass.; George B. Holbrook, Barnstable, Mass.; William F. Whiting, Holyoke, Mass.; Herbert B. Viall, Keene, N. H.; William Skinner, Holyoke, Mass.; Harley E. Folsom, Lydonville, Vt.

GENERAL EXHIBIT FOR THE YEAR.

Rental received from lease of road.....	\$518,617.61
Income from other sources:	
Interest on bank balance.....	127.82
Gross income	\$518,745.43
Expenses and charges upon income accrued during the year:	
Salaries and maintenance of organization..	\$1,558.79
Interest on funded debt.....	84,065.00
Interest and discount on unfunded debts and loans	100,000.00
Reserve for corporation expenses.....	569.03
Additions and betterments made by Boston & Maine Railroad and paid for out of income	9,222.61
Total expenses and charges upon income.....	195,415.43
Net divisible income.....	\$323,330.00
Dividends declared, 10% on common stock.....	323,330.00
Surplus for the year ending June 30, 1914.....	.....
Deficit June 30, 1913.....	43,948.89
Deficit June 30, 1914.....	\$43,948.89

GENERAL BALANCE SHEET.

Assets.

Cost of road	\$6,223,928.00
Cost of equipment	455,977.66

Lands:		
Land necessary for operation of railway.....		\$35,726.91
Stock:		
Vermont Valley Railroad.....	\$1,082,520.00	
Hampden Park Association.....	27,887.50	
		<u>1,110,407.50</u>
Total permanent investments.....		\$7,826,040.07
Cash and current assets:		
Cash	\$25,236.88	
Bills and accounts receivable.....	168,221.30	
		<u>193,458.18</u>
Total cash and current assets.....		193,458.18
Profit and loss balance—deficit.....		<u>43,948.89</u>
Total		\$8,063,447.14

Liabilities.

Capital stock, common.....		\$3,233,300.00
Funded debt		2,260,250.00
Current liabilities:		
Coupon notes due June 2, 1915.....	\$2,000,000.00	
Dividends not called for.....	739.00	
Matured interest coupons unpaid (including coupons due July 1)	22,365.50	
Miscellaneous current liabilities:		
Boston & Maine Railroad advances.....	503,253.67	
Fund for corporation expenses.....	1,495.23	
		<u>2,527,853.40</u>
Total current liabilities.....		2,527,853.40
Interest accrued and not yet due.....		<u>21,388.90</u>
Additions to property since June 30, 1907.....		20,654.84
Total		*\$8,063,447.14

PROPERTY ACCOUNTS.

Additions to property account:		
Extension of tracks—		
Side tracks	\$2,125.36	
Extension of Connecticut River Railroad in New Hampshire	135,235.29	
		<u>\$137,360.65</u>
Total		\$137,360.65
Other additions to railway:		
Rebuilding bridge	\$9,122.03	
Automatic signals	1,788.42	
Block signals	2,637.59	
Separation of grades, West Northfield, Mass.	13,113.21	
Separation of grades, Hinsdale, N. H.....	18,087.70	
		<u>44,748.95</u>
Total		44,748.95
Additions to equipment:		
Additional machine tools	\$7,844.15	
Equipping boilers with automatic stokers...	1,639.44	
		<u>9,483.59</u>
Total		9,483.59
New buildings necessary for operation of rail- way:		
Additional office room—Springfield.....	\$1,076.71	
Additional platform freight house, Spring- field	978.00	
New fuel station—Springfield.....	31,380.70	
Paving driveway to freight house—Holyoke	657.50	
		<u>\$34,092.91</u>

*At a stockholders' meeting Jan. 19, 1914, it was voted to guarantee \$2,300,000.00 coupon one-year notes of the Vermont Valley Railroad. This constitutes a contingent liability against the company.

New station yard, Easthampton.....	\$21,885.32	
Water tank, Winchester, N. H.....	200.00	
Passenger shelter, Dole Jct., N. H.....	245.17	
Total		\$56,423.40
Total additions to property.....		\$248,016.59
Deductions from property accounts:		
Sale of land, Springfield, Mass.....	\$1,419.70	
Sale of land, Northampton, Mass.....	87.50	
Storeroom destroyed by fire, Willimansett...	1,000.00	
Total deductions from property accounts.....		2,507.20
Net addition to property account for the year.....		\$245,509.39

CAPITAL STOCK.

Common: authorized, 36,700 shares; issued and outstanding, 32,333 shares, par value.....	\$3,233,300.00
Number of stockholders, 1,111; number in New Hampshire, 23.	
Amount of stock held in New Hampshire.....	81,000.00

FUNDED DEBT.

Description of bonds, Etc.	Rate of interest.	Date of maturity.	Amount outstanding.	Interest paid during year.
10-year Scrip bonds	4%	Jan. 1, 1903	\$1,250.00	\$300.00
50-year gold bonds.....	4%	Sept. 1, 1943	1,000,000.00	40,000.00
20-year gold bonds.....	3½%	Jan. 1, 1921	290,000.00	10,150.00
20-year gold bonds.....	3½%	Jan. 1, 1923	969,000.00	33,915.00
Total			\$2,260,250.00	\$84,365.00

RAILROAD OWNED.

Main line, single track, 88.36 miles; second track, 37.51 miles; sidings, switches, etc., 76.36 miles; total single track, 202.23 miles. In New Hampshire: main line, 30.68 miles; sidings, switches, etc., 7.53 miles; total single track, 38.21 miles.

FITCHBURG RAILROAD COMPANY.

BOSTON, MASS.

PRINCIPAL OFFICERS.

President, Moses Williams; Treasurer and Clerk of Corporation, George O. Foster, Boston, Mass.

DIRECTORS.

Joseph B. Russell, Cambridge, Mass.; William E. Rice, Worcester, Mass.; Moses Williams, Brookline, Mass.; Gordon Abbott, Manchester, Mass.; Frederic J. Stimson, Dedham, Mass.; Charles E. Ware, Fitchburg, Mass.; Robert Winsor, Weston, Mass.; George R. Wallace, Fitchburg, Mass.; Charles T. Russell, Cambridge, Mass.; Moses Williams, Jr., Needham, Mass.; Alvah Crocker, Charles T. Crocker, Fitchburg, Mass.

GENERAL EXHIBIT FOR THE YEAR.

Rental received from lease of road.....	\$2,051,129.20
Income from other sources:	
Contingent fund	\$75.95
Interest on bank balance	358.37
Contribution from B. & M. Rd. account of bond issue expenses.....	1,121.19
	1,555.51
Gross income	\$2,052,684.71

Expenses and charges upon income accrued during year:	
Salaries and maintenance of organization..	\$11,555.51
Interest on funded debt.....	1,054,045.00
Additions and betterments through income..	44,084.20
Total expenses and charges upon income.....	<u>\$1,109,684.71</u>
Net divisible income.....	\$943,000.00
Dividends declared, 5% on preferred stock.....	<u>943,000.00</u>
Surplus for the year ending June 30, 1914.....	.....
Amount of surplus June 30, 1913.....	<u>\$2,027,042.16</u>
Credits to profit and loss account during the year:	
Extinguishment bond premiums.....	18,110.38
Total surplus June 30, 1914.....	<u>\$2,045,152.54</u>

GENERAL BALANCE SHEET.

Assets.

Cost of road	\$11,760,766.89	
Electric line construction, including poles, wiring, feeder lines, etc.....	549,454.65	
Purchase of constructed road and equipment..	30,553,626.15	
Engineering and other expenses incident to construction	96,518.41	
Signals Tel. and Tel. lines.....	<u>1,508,100.61</u>	
Total cost of railway owned.....		\$44,468,466.71
Cost of equipment:		
Cars and other rolling stock.....		3,828,354.47
Cost of land and buildings:		
Land necessary for operation of railway...	\$1,891,840.72	
Electric power stations, including equipment	16,953.78	
Other buildings necessary for operation of railway	<u>3,094,872.47</u>	
Total cost of land and buildings owned.....		5,003,666.97
Other permanent property:		
Land and water rights, Conway, Mass.....		<u>8,262.64</u>
Total permanent investments.....		\$53,308,750.79
Cash and current assets:		
Cash	\$7,705.51	
Bills and accounts receivable.....	<u>425,545.68</u>	
Total cash and current assets.....		433,251.19
Miscellaneous assets:		
Materials and supplies leased to Boston & Maine Railroad	\$936,034.06	
Other assets and property, common stock...	1,448,600.00	
Conway Electric St. Ry. Co.....	<u>135,607.00</u>	
Total miscellaneous assets.....		<u>2,520,241.06</u>
Total		<u>\$56,262,243.04</u>

Liabilities.

Capital stock—common	\$7,000,000.00
preferred	<u>18,860,000.00</u>
Total capital stock	\$25,860,000.00
Funded debt	<u>\$25,939,000.00</u>

Current liabilities:

Dividends not called for.....	\$1,019.50	
Matured interest coupons unpaid (including coupons due July 1)	145,420.00	
Boston & Maine Railroad, Fitchburg Rail- road improvements	1,182,994.96	
Total current liabilities.....		\$1,329,434.46

Accrued liabilities:

Interest accrued and not yet due.....	\$222,092.90	
Rentals accrued and not yet due.....	58,815.00	
Bonds matured and unpaid	5,000.00	
Total accrued liabilities.....		285,907.90

Sinking and other special funds:

Contingent fund	\$621.01	
Premium on bonds sold.....	206,408.58	
Premium on stock sold.....	444,637.21	
Additions and betterments through income..	151,081.34	
Total sinking and other special funds.....		802,748.14
Profit and loss balance—surplus		2,045,152.54

Total		\$56,262,243.04
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PROPERTY ACCOUNTS.**Additions to railway:**

Extensions of tracks.....	\$369,859.27	
New electric line construction.....	9,277.85	
Other additions to railway.....	167,001.41	
Total additions to railway.....		\$546,138.53

Additions to land and buildings:

Additional land necessary for operation of railway	\$13,078.37	
New electric power stations, including ma- chinery, etc.	16,721.84	
Other new buildings necessary for operation of railway	584,528.50	
Total additions to land and buildings.....		614,328.71

Total additions to property accounts.....		\$1,160,467.24
Deductions from property account (property sold or reduced in valuation and credited to property accounts).....		13,765.01

Net addition to property accounts for the year.....		\$1,146,702.23
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CAPITAL STOCK.**Authorized, issued and outstanding:**

Common, 70,000 shares, par value.....	\$7,000,000.00	
Preferred, 188,600 shares, par value.....	18,860,000.00	
Total		\$25,860,000.00

Total number of shares outstanding, 258,600.

Number of stockholders, common, 2; preferred, 6,291.

Number of stockholders in New Hampshire, preferred, 576.

Amount of stock held in New Hampshire.....		497,200.00
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FRANKLIN & TILTON RAILROAD.

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Description of Bonds.	Rate of interest.	Date of maturity.	Amount outstanding.	Interest paid during year.
Troy & Boston Railroad, 1st mortgage.	7%	July 1, 1924	\$573,000.00	\$40,110.00
Fitchburg Railroad..	4½%	May 1, 1914	.....	22,477.50
Fitchburg Railroad..	4%	Mar. 1, 1915	1,359,000.00	54,480.00
Fitchburg Railroad..	4%	July 1, 1916	500,000.00	19,920.00
Fitchburg Railroad..	4%	Jan. 1, 1920	500,000.00	20,200.00
Fitchburg Railroad..	3½%	Oct. 1, 1920	500,000.00	17,500.00
Fitchburg Railroad..	3½%	Oct. 1, 1921	1,775,000.00	62,037.50
Fitchburg Railroad..	4%	May 1, 1925	3,660,000.00	146,320.00
Fitchburg Railroad..	4%	Mar. 1, 1927	2,750,000.00	109,820.00
Fitchburg Railroad..	4%	Apr. 1, 1927	2,000,000.00	79,960.00
Fitchburg Railroad..	4%	Jan. 1, 1928	1,450,000.00	57,980.00
Fitchburg Railroad..	4½%	Jan. 1, 1932	1,200,000.00	53,910.00
Fitchburg Railroad..	4½%	Jan. 1, 1933	400,000.00	.....
Fitchburg Railroad..	5%	Jan. 1, 1934	1,872,000.00	18,000.00
Fitchburg Railroad..	4%	Feb. 1, 1937	5,000,000.00	200,000.00
Fitchburg Railroad..	4½%	May 1, 1928	2,400,000.00	112,702.50
Total			\$25,939,000.00	\$1,015,417.50

RAILROAD OWNED.

Main line, single track, 394.14; second track, 143.16; third track, 3.68; fourth, 2.02; total main track, 543 miles.

FRANKLIN & TILTON RAILROAD.

FRANKLIN, N. H.

HISTORY.

See Report of Public Service Commission of New Hampshire on the Investigation of Railroad Rates, page 270.

PRINCIPAL OFFICERS.

President, Benjamin A. Kimball, Concord, N. H.; Treasurer, Frank Proctor, Clerk of Corporation, Edward G. Leach, Franklin, N. H.

DIRECTORS.

Benjamin A. Kimball, Concord, N. H.; Alvah W. Sulloway, Franklin, N. H.; William F. Whitcher, Woodsville, N. H.; Richard W. Sulloway, Franklin, N. H.; Thomas R. Varick, Manchester, N. H.; Thomas H. Dearborn, Dover, N. H.

GENERAL BALANCE SHEET.

Assets.

Cost of road.....	\$173,325.90	
Engineering and other expenses incident to construction	6,469.11	
Total cost of railway owned		\$179,795.01
Total cost of equipment owned.....		16,518.94

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Cost of land and buildings:	
Land necessary for operation of railway..	\$56,129.25
Other buildings necessary for operation of railway	19,311.60
Total cost of land and buildings owned.....	75,440.85
Total	\$271,754.80

Liabilities.

Miscellaneous current liabilities:	
Due Boston & Maine Railroad account construction....	\$6,154.80
Capital stock, common.....	265,600.00
Total	\$271,754.80

PROPERTY ACCOUNTS.

Additions to permanent property:	
Rebuilding bridge, No. 216.....	\$3,532.00

CAPITAL STOCK.

Authorized, issued and outstanding:	
Common, 2,656 shares, par value.....	\$265,600.00
Number of stockholders, 2; both in New Hampshire.	

RAILROAD OWNED.

Main line, Franklin to Tilton.....	4.95 miles
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EXPLANATORY REMARKS.

The Franklin & Tilton Railroad was leased to The Concord & Montreal Railroad October 8, 1895, for the term of 91 years from April 1, 1895, at the nominal rental of \$1.00 annually, with such additional sums as may be necessary to keep up the organization of the lessor. On the same date this lease was assigned to the Boston & Maine Railroad, which corporation now operates the said Franklin & Tilton Railroad under the said lease.

GLEN JUNCTION TRANSFER COMPANY.

HISTORY, DESCRIPTION ETC.

Incorporated by act of New Hampshire legislature, approved January 23, 1897, renewed and amended by act approved April 2, 1903.

This road is situated near the mills of the International Paper Company at Berlin, N. H., and connects with the tracks of the Boston & Maine and the Grand Trunk railways. It has one and one-half miles of main track and about one and one-half miles of side tracks. The right of way is rented from the International Paper Company. The tracks are owned by the Glen Junction Transfer Company, which operates its own road.

CONTROL.

The respondent is under sole control of the International Paper Company through purchase of capital stock, entire, except as to stock held by directors and clerk.

PRINCIPAL OFFICERS.

President, P. T. Dodge; Vice-President, W. D. Russell; Treasurer, Owen Shepherd; Assistant Treasurer, Guy E. Capron, New York, N. Y.; Assistant Treasurer, Merrill Shurtleff, Lancaster, N. H.; Auditor, B. O. Booth, New York, N. Y.; Clerk, Merrill Shurtleff, Lancaster, N. H.; Assistant Clerk, F. G. Simons, New York, N. Y.; Superintendent, F. A. Dieckmann, Berlin, N. H.

DIRECTORS.

P. T. Dodge, W. D. Russell, A. H. White, New York, N. Y.; George H. Parks, Glens Falls, N. Y.; Owen Shepherd, New York, N. Y.

INCOME ACCOUNT.

Operating revneues:		
From incoming and outgoing cars.....	\$15,332.00	
From switching in International Paper Co. yard	6,000.00	
Total		\$21,332.00
Operating expenses:		
Maintenance of ways and structures.....	\$15,142.58	
Maintenance of equipment.....	3,257.89	
Transportation	12,281.92	
General expenses	511.81	
Insurance	179.40	
Interest	1,561.15	
Total		32,935.35
Net operating loss		\$11,603.35
Depreciation		1,200.00
Loss for year		\$12,803.35
Surplus at beginning of year.....		2,196.37
Loss at close of year		\$10,606.98

GENERAL BALANCE SHEET.

Assets.

Property investment:	
Investment to June 30, 1907.....	\$31,300.00
Investment since June 30, 1907.....	*19,361.25
Total property investment.....	\$50,661.25
Insurance	155.94
Cash	1,107.91
Deficit	10,606.98
Total	\$62,532.08

Liabilities.

Capital stock, common, 1,200 shares, par value.....	\$30,000.00
Accounts payable	25,332.08
Depreciation reserve	7,200.00
Total	\$62,532.08

*Adjustment of \$2,381.52 made during the year for maintenance items wrongfully charged to this account in 1913. This amount was transferred to expenses of report for this period.

MAINE CENTRAL RAILROAD.

HISTORY.

For date and authority for organization and for each consolidation, see Annual Report 1912 of the Public Service Commission of N. H.

PRINCIPAL OFFICERS.

President, Morris McDonald; Second Vice-President, George S. Hobbs; Clerk of Corporation, Charles H. Blatchford; Treasurer, George W. York; General Counsel, Seth M. Carter; Comptroller, Arthur P. Foss; Auditor, Albert J. Raynes; Purchasing Agent, Charles D. Barrows; General Manager, Dana C. Douglass; Chief Engineer, Bertrand T. Wheeler; General Freight Agent, William K. Sanderson; General Passenger Agent, Holman D. Waldron; Superintendent of Motive Power, Philip M. Hammet, Portland, Me.

DIRECTORS.

Morris McDonald, Portland, Me.; Samuel Hemmingway, New Haven, Conn.; Joseph W. Symonds, Portland, Me.; Edward P. Ricker, South Poland, Me.; Weston Lewis, Gardiner, Me.; John S. Hyde, Bath, Me.; T. DeWitt Cuyler, Philadelphia, Pa.; George A. Curran, Calais, Me.; Frederick H. Appleton, Bangor, Me.; John E. Liggett, Augusta, Me.; Fred E. Richards, Portland, Me.; Elisha R. Brown, Dover, N. H.; Alvah W. Sulloway, Franklin, N. H.; Hugh J. Chisholm; Edward B. Winslow, Portland, Me.

TRANSPORTATION CORPORATIONS CONTROLLED.

Active corporations:

Sole, direct control, capital stock ownership—

Portland Terminal Company.....	100 %
Portland, Mt. Desert & Machias Steamboat Company...	88
Sandy River & Rangeley Lakes Railroad.....	100
Rangeley Lakes & Megantic Railroad Company.....	100
Bridgton & Saco River Railroad Company.....	100
Indian River Railway Company.....	100

Sole, indirect control, capital stock ownership and lease—

Upper Coös Railroad Company of Vermont (lease May 1, 1890), indirect control established through Upper Coös Railroad of New Hampshire.....	100
Coös Valley Railroad Company (lease May 1, 1890), indirect control established through Upper Coös Railroad of New Hampshire	100

The capital stock of the Upper Coös Railroad of Vermont and Coös Valley Railroad Company is held by the Maine Central Railroad Company under terms of lease of the Upper Coös Railroad of New Hampshire, dated May 1, 1890, for entire term of said lease, 999 years, said stock to be returned to lessor at expiration of lease.

FACTS PERTAINING TO CONTROL.

Date of last meeting of stockholders for election of directors: October 15, 1913.

Date of last closing of stock books before end of year: stock books do not close.

Total number of stockholders of record: 1,002.

Each share of stock has one vote.

No issue of securities has contingent voting rights, or special privileges in the election of directors.

ROAD OPERATED—ENTIRE LINE.

Line owned, main line	202.34 miles
Line owned, branches and spurs.....	441.51
Line held under lease	549.16
Line held under trackage rights.....	14.94
Line operated under contract or agreement.....	.89
Total mileage operated	1,208.84 miles
Mileage in New Hampshire.....	100.17

ROAD OPERATED—STATE OF NEW HAMPSHIRE.

The Portland and Ogdensburg Railway, from Fryeburg, Me., to Lunenburg, Vt., 57.98 miles in New Hampshire, held under lease for 999 years, from August 30, 1888, at 2% on capital stock and 4½% on bonds.

Upper Coös Railroad, N. H., from Quebec Junction, N. H., to Guildhall, Vt., 41.52 miles in New Hampshire, held under lease for 999 years from May 1, 1890, at 4% and 4½% on bonds and 6% on capital stock.

Hereford Railway, crossing Halls Stream in two places, .67 miles in New Hampshire, held under lease for 999 years, from May 1, 1890, at 4% on bonds and capital stock.

Each company is allowed \$500 organization expenses.

OUTSIDE OPERATIONS AND MISCELLANEOUS INVESTMENTS.

Outside operations—owned:

Dining car service—

Meals, Maine, New Hampshire, Vermont, and Province of Quebec;

Coal and ore dock service—

Coal discharging plant, Maine:

*Frenchman's Bay steamboats—

*Penobscot Bay steamboats—

Common carriers, Maine;

Hotel and restaurants—

General hotel Maine.

Miscellaneous investments:

Hotel Rockwood property—hotel business, Maine, net investment

\$30,318.72

Bar Harbor property—hotel business, Maine, net investment

255,310.77

CAPITAL STOCK.

Par value authorized, 250,000 shares	\$25,000,000.00
Par value outstanding, 248,881 shares.....	\$24,888,100.00
Stock, scrip	317.00
Receipts outstanding for installments paid.....	350.00
Total par value outstanding.....	\$24,888,767.00

RECAPITULATION OF FUNDED DEBT.

Kind.	Total par value outstanding.	Par value held in sinking or other funds.	Total par value not held.	Interest paid during the year.
Mortgage bonds*	\$6,211,500	\$104,000	\$5,176,500	\$203,250.00
Collateral trust bonds.	662,000	5,000	657,000	33,525.00
Plain bonds, debentures and notes	6,000,000	18,000	5,982,000	80,260.00
Miscellaneous funded ob- ligations	450,000	73,000	377,000	16,875.00
Total	\$13,323,500	\$200,000	\$12,192,500	\$333,910.00

The interest accrued during the year amounted to \$362,549.36.

RECAPITULATION OF CAPITALIZATION.

Account.	Total par value. outstanding.	Assignment to railways.	Miles of line.	Amount per mile.
Capital stock	\$24,888,767	\$24,888,767	643.85	\$38,656
Funded debt	13,323,500	13,323,500	643.85	20,693
Total	\$38,212,267	\$38,212,267	643.85	\$59,349

*The Maine Central Railroad Company owns and operates a line of steamboats in Frenchman's Bay, running from Mt. Desert Ferry, and one in Penobscot Bay, running from Rockland. These boats run in connection with Maine Central trains for the accommodation of Maine Central patrons, and transport passengers, freight, mail, and express.

†A par value of \$269,000 is held in the treasury and a par value of \$662,000 is held and pledged as collateral.

ROAD AND EQUIPMENT--ENTIRE LINE.

Summary.

Prior to June 30, 1907, road	\$14,562,748.85
Prior to June 30, 1907, equipment.....	7,333,752.14
June 30, 1907--June 30, 1913.....	13,240,211.83
June 30, 1913--June 30, 1914.....	1,055,554.54
Total	<u>\$36,192,267.36</u>
Reserve for accrued depreciation.....	3,948,813.73
Net total	<u>\$32,243,453.63</u>
Cost per mile of line (643.85 miles)	\$50,079.14

ROAD AND EQUIPMENT INVESTMENT--STATE OF NEW HAMPSHIRE.

(Additions and betterments during the year.)

Engineering	\$15.60
Grading	1,017.49
Bridges, trestles, and culverts.....	391.58
Ties	159.57
Rails	2,530.65
Frogs and switches	433.49
Track fastenings and other materials.....	5,668.58
Ballast	209.95
Track laying and surfacing.....	447.17
Crossings and signs.....	1,207.09
Station buildings and fixtures	214.24
Miscellaneous structures	356.15
Rent of equipment	173.35
Total	<u>\$12,824.91</u>

INCOME ACCOUNT.

Operating income--	
Rail operations--	
Operating revenues	\$11,685,968.94
Operating expenses	<u>8,487,420.06</u>
Net operating revenue	\$3,198,548.88

Outside operations—		
Revenues	\$148,019.97	
Expenses	198,186.85	
	<hr/>	
Net deficit from outside operations.....		50,166.88
		<hr/>
Total net revenue		\$3,148,382.00
Taxes accrued		611,495.58
		<hr/>
Operating income		\$2,536,886.42
Other income:		
Income from lease of road.....	\$42,719.76	
Hire of equipment, balance.....	91,371.84	
Joint facility rent income.....	76,564.46	
Miscellaneous rents	11,998.46	
Net profit from miscellaneous physical property	500.00	
Dividends income	137,992.15	
Income from funded securities.....	14,790.00	
Income from unfunded securities and accounts	77,733.95	
Income from sinking and other reserve funds	16,783.11	
	<hr/>	
Total other income.....		470,453.73
		<hr/>
Gross income		\$3,007,340.15
Deductions from gross income:		
Deductions for lease of other roads.....	\$1,108,925.89	
Joint facility rent deductions.....	100,902.56	
Miscellaneous rent deductions.....	23,691.48	
Interest deductions for funded debt.....	362,549.36	
Interest deductions for unfunded debt..	20,741.81	
Amortization of discount on funded debt.	4,340.00	
	<hr/>	
Total deductions		1,621,151.10
		<hr/>
Net income		\$1,386,189.05
Disposition of net income:		
Appropriations of income to sinking and other reserve funds.....	38,128.11	
Dividend appropriations of income.....	1,491,797.25	
	<hr/>	
		1,529,925.36
		<hr/>
Income balance transferred to debit of Profit and Loss		\$143,736.31

PROFIT AND LOSS STATEMENT.

DR.

Debit balance transferred from income account.....	\$143,736.31
Miscellaneous debits*	12,196.19
Balance debit	3,136,288.42
Total	\$3,292,220.92

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Balance, June 30, 1913.....	\$3,148,484.61
Miscellaneous credits**	143,736.31
Total	\$3,292,220.92

Adjustment of bridge scrap account	\$18,225.85	
Property abandoned	7,986.92	
Uncollectible accounts	2,203.80	
		\$28,416.57
Less		
U. S. Excise taxes refunded.....	\$7,111.24	
Adjustment of interest on bonds held in sinking fund and treasury	8,018.33	
Miscellaneous items	1,090.81	
		16,220.38
Balance		\$12,196.19

DIVIDENDS.

Name of security on which the dividend was declared:	Rate per cent regular.	Par value of amount on which dividend was declared.	Distribution of charge income.
Common stock	6	\$99,036,900	\$1,485,553.50
Portland & Kennebec stock scrip	6	2,400	36.00
Androscoggin & Kennebec and Penobscot & Kennebec stock	6	28,400	426.00
Receipts outstanding for installments paid	6	383,450	5,781.75
			\$1,491,797.25

OPERATING REVENUES—ENTIRE LINE AND STATE.

Account.	Entire line.	State of New Hampshire.
Revenue from transportation:		
Freight revenue	\$7,440,035.07	\$334,903.08
Passenger revenue	\$3,517,583.22	\$125,235.22
Excess baggage revenue.....	49,910.39	1,342.46
Mail revenue	240,956.69	8,280.85
Express revenue	243,557.46	3,563.40
Milk revenue (on passenger trains) ..	2,560.36	.....
Other passenger train revenue.....	17,127.43	86.00
Total passenger service train revenue	\$4,071,695.55	\$138,507.93
Switching revenue	46,612.99	243.36
Special service train revenue.....	10,270.10	.....
Miscellaneous transportation revenue..	151.94	.....
*Total revenue from transportation..	\$11,568,765.65	\$473,654.37

*Miscellaneous debits (net)

**\$143,736.31 represents deficit for the year transferred to debit of "Contingent Fund."

	Entire line.	State of New Hampshire.
Revenue from other operations:		
Station and train privileges.....	\$11,196.38	\$348.17
Parcel-room receipts	5,621.20	131.10
Storage—freight	4,258.46	118.75
Storage—baggage	2,863.05	43.50
Car service	61,681.61	1,339.35
Telegraph and telephone service.....	5,063.19	.....
Rents of buildings and other property	16,610.98	2,204.94
Miscellaneous	9,908.42	.....
Total revenue from operations other than transportation	\$117,203.29	\$4,185.81
Total operating revenues.....	\$11,685,968.94	\$477,840.18

OPERATING EXPENSES—ENTIRE LINE AND STATE.

Maintenance of way and structures:		
Superintendence	\$66,334.46	\$4,935.46
Ballast	25,285.87	391.49
Ties	185,520.45	18,760.50
Rails	105,953.32	12,143.72
Other track material.....	95,646.83	8,636.76
Roadway and track.....	690,676.14	49,844.09
Removal of snow, sand, and ice.....	79,491.81	8,148.13
Bridges, trestles, and culverts.....	121,233.41	1,420.39
Over and under grade crossings.....	7,033.54	216.26
Grade crossings, fences, cattle guards and signs	40,663.88	3,065.91
Signals and interlocking plants.....	62,842.25	2,904.63
Telegraph and telephone lines.....	2,218.80	2.89
Buildings, fixtures and grounds.....	134,753.95	6,224.58
Docks and wharves.....	16,536.72	.....
Roadway tools and supplies.....	27,544.84	1,021.49
Injuries to persons.....	1,742.34	479.80
Stationery and printing.....	3,371.53	296.02
Other expenses	163.58	.....
Maintaining joint tracks, yards and other facilities—Dr.	92,953.42	48.72
Maintaining joint tracks, yards and other facilities—Cr.....	88,498.50	.....
Total	\$1,671,468.64	\$118,540.84
Maintenance of equipment:		
Superintendence	\$44,542.71	\$2,938.40
Steam locomotives—repairs	504,935.02	33,298.43
Steam locomotives—renewals	1,187.53	73.10
Steam locomotives—depreciation	67,570.50	4,441.55
Passenger-train cars—repairs	162,825.96	8,790.07
Passenger-train cars—depreciation ...	28,392.28	1,483.88
Freight-train cars—repairs	751,796.92	43,877.57
Freight-train cars—renewals	2,649.79	298.87
Freight-train cars—depreciation	143,900.49	7,603.59
Floating equipment—repairs	8,539.24	.....
Floating equipment—depreciation	6,866.28	.....
Work equipment—repairs	29,955.42	2,367.34
Work equipment—renewals	1,465.55	113.30
Work equipment—depreciation	5,658.64	437.39
Shop machinery and tools.....	16,363.08	923.69
Injuries to persons.....	832.43	1.81
Stationery and printing.....	4,682.43	299.20
Maintaining joint equipment at ter- minals—Dr.	20,116.39	1,097.78
Total	\$1,796,981.08	\$107,448.23

	Entire line.	State of New Hampshire.
Traffic expenses:		
Superintendence	\$52,748.75	\$3,488.93
Outside agencies	8,236.51	565.08
Advertising	40,599.82	3,221.29
Traffic associations	1,304.85	82.47
Fast freight lines	2,708.98	178.62
Industrial and immigration bureaus..	14,680.82	948.87
Stationery and printing	17,479.21	1,109.02
Other expenses	266.50	16.48
Total	<u>\$138,025.44</u>	<u>\$9,610.76</u>
Transportation expenses:		
Superintendence	\$69,422.31	\$4,281.16
Dispatching trains	27,425.18	2,425.31
Station employees	557,106.56	33,557.34
Weighing and car-service associations	691.00	53.27
Station supplies and expenses	75,931.62	3,532.23
Yardmasters and their clerks	32,230.98	.....
Yard conductors and brakemen	136,788.19	4,528.10
Yard switch and signal tenders	22,607.85	400.27
Yard supplies and expenses	3,363.98	4.63
Yard enginemen	91,732.61	3,173.04
Enginehouse expenses—yard	33,385.85	1,301.44
Fuel for yard locomotives	123,305.62	4,465.15
Water for yard locomotives	6,571.90	248.67
Lubricants for yard locomotives	685.88	103.90
Other supplies for yard locomotives..	823.40	75.45
Operating joint yards and terminals—		
Dr.	455,861.21	.....
Operating joint yards and terminals—		
Cr.	1,863.43	.....
Road enginemen	507,698.51	39,998.50
Enginehouse expenses—road	141,738.99	9,717.27
Fuel for road locomotives	1,139,909.35	102,524.89
Water for road locomotives	40,560.13	3,338.31
Lubricants for road locomotives	12,717.51	1,158.26
Other supplies for road locomotives..	14,167.20	890.03
Road trainmen	609,905.74	40,339.68
Train supplies and expenses	115,374.11	7,798.12
Interlockers and block and other sig- nals—operation	103,311.54	7,642.80
Crossing flagmen and gatemen	61,314.95	1,683.56
Drawbridge operation	1,459.11	.....
Clearing wrecks	10,276.48	238.19
Telegraph and telephone—operation..	7,993.06	4.96
Operating floating equipment	24,493.49	.....
Stationery and printing	36,592.64	2,433.79
Other expenses	3,513.82	246.77
Loss and damage—freight	40,566.99	2,646.80
Loss and damage—baggage	1,453.99	.....
Damage to property	41,747.72	79.96
Damage to stock on right of way	2,654.03	62.57
Injuries to persons	11,887.69	165.40
Operating joint tracks and facilities—		
Dr.	723.84	459.95
Operating joint tracks and facilities—		
Cr.	50,087.65	4,214.18
Total	<u>\$4,516,043.95</u>	<u>\$275,365.59</u>
General expenses:		
Salaries and expenses of general of- ficers	\$57,186.23	\$3,792.62
Salaries and expenses of clerks and attendants	129,717.25	8,554.55
General office supplies and expenses..	10,776.93	711.70
Law expenses	56,232.85	3,690.74
Insurance	50,567.73	3,071.38
Pensions	13,061.81	161.29

	—Entire line.	State of New Hampshire.
Stationery and printing.....	\$16,969.19	\$1,120.09
Valuation expenses	7,732.44	678.13
Other expenses	13,390.13	876.40
General administration joint tracks, yards and terminals—Dr.....	9,273.89	.....
General administration joint tracks, yards and terminals—Cr.....	7.50	7.50
Total	\$364,900.95	\$22,649.40
Recapitulation of expenses:		
Maintenance of way and structures...	\$1,671,468.64	\$118,540.84
Maintenance of equipment.....	1,796,981.08	107,448.23
Traffic expenses	138,025.44	9,610.76
Transportation expenses	4,516,043.95	275,365.59
General expenses	364,900.95	22,649.40
Total	\$8,487,420.06	\$533,614.82

Ratio of operating expenses to operating revenues, per cent, 72.63.

RECAPITULATION OF HIRE OF EQUIPMENT.

Account.	Amount Receivable.	Amount Payable.
Equipment interchanged	\$1,012,600.81	\$872,542.79
Private cars .....	.....	48,686.18
Total	\$1,012,600.81	\$921,228.97
Balance	91,371.84	.....

TAXES AND ASSESSMENTS.

State.	Total, 1913.	Total, 1914.
Maine	\$495,021.67	\$550,495.23
New Hampshire	37,195.87	38,937.36
Vermont	5,380.31	6,762.10
Province of Quebec.....	1,736.39	1,751.44
Province of New Brunswick.....	91.60	91.60
United States Internal revenue.....	9,195.73	13,457.85
Total	\$548,621.57	\$611,495.58

COMPARATIVE GENERAL BALANCE SHEET.

June 30, 1913.	Assets.	June 30, 1914.
	Property investment:	
	Road and equipment—	
	Investment to June 30, 1907—	
\$14,562,748.85	Road	\$14,562,748.85
7,333,752.14	Equipment	7,333,752.14
\$21,896,500.99		\$21,896,500.99
	Investment since June 30, 1907—	
\$8,709,276.85	Road	\$9,004,090.99
4,542,857.25	Equipment	5,303,597.65
11,922.27	General expenditures	11,922.27
\$13,240,211.83		\$14,295,766.37
\$35,136,712.82		\$36,192,267.36
3,911,000.64	Reserve for accrued depreciation, Cr.	3,948,813.73
\$31,225,712.18	Total	\$32,243,453.63

Securities:		
Securities issued or assumed—pledged—		
\$669,000.00	Funded debt.....	\$662,000.00
Securities of proprietary, affiliated, and controlled companies—unpledged—		
\$3,100,654.00	Stocks	\$6,125,654.00
208,800.00	Funded debt	208,800.00
\$3,309,454.00		\$6,334,454.00
\$3,978,454.00	Total	\$6,996,454.00
\$193,182.52	Other investments	\$285,629.49
Working assets:		
\$2,057,571.39	Cash	\$879,041.49
Securities issued or assumed—held in treasury—		
\$50.00	Stocks	\$50.00
262,000.00	Funded debt	269,000.00
\$262,050.00		\$269,050.00
Marketable securities—		
\$303,010.00	Stocks	\$303,010.00
123,000.00	Funded debt	123,000.00
86.67	Miscellaneous	86.67
\$426,096.67		\$426,096.67
\$1,078,986.00	Loans and bills receivable.....	\$1,551,001.00
380,199.72	Traffic and car-service balances due from other companies	341,279.19
231,708.06	Net balance due from agents and conductors	216,655.31
513,459.28	Miscellaneous accounts receivable.....	502,975.48
1,292,246.10	Materials and supplies.....	1,414,152.37
82,885.37	Other working assets	71,794.90
\$6,325,202.59	Total	\$5,672,046.41
Deferred debit items:		
\$430.00	Advances—working funds	\$172.00
39,694.19	Rents and insurance paid in advance..	38,384.85
.....	Unextinguished discount on funded debt	125,860.00
.....	Property abandoned	98,200.00
51,512.00	Special deposits	40,877.00
608,335.33	Cash and securities in sinking and redemption funds	639,087.47
1,078,824.26	Other deferred debit items.....	1,428,607.42
\$1,778,795.78	Total	\$2,371,188.74
\$43,501,347.07	Grand total	\$47,568,772.27

Liabilities.

June 30, 1913.	Stock:	June 30, 1914.
.....	Common stock held by company.....	\$50.00
\$24,516,816.66	Common stock not held by company..	24,888,366.67
238,625.01	Receipts outstanding for installments paid	350.00
18,700.00	Stock liability for conversion of outstanding securities of constituent companies	18,700.00
3,456.00	Premiums realized on capital stock...	3,456.00
\$24,777,597.67	Total	\$24,910,922.67

Mortgage, bonded, and secured debt:		
Funded debt—		
.....	Mortgage bonds, held by company..	\$1,035,000.00
\$6,211,500.00	Mortgage bonds, not held by company	5,176,500.00
Collateral Trust bonds, held by com-		
.....	pany	5,000.00
669,000.00	Collateral Trust Bonds, not held by	657,000.00
company		
Plain bonds, debentures, and notes,		
.....	held by company.....	18,000.00
2,000,000.00	Plain bonds, debentures, and notes, not	5,982,000.00
held by company		
Miscellaneous funded obligations held		
.....	by company	73,000.00
450,000.00	Miscellaneous funded obligations not	377,000.00
held by company		
\$9,330,500.00	Total	\$13,323,500.00
Working liabilities:		
\$295,308.26	Traffic and car-service balances due to	
915,819.95	other companies	\$237,519.26
48,159.68	Audited vouchers and wages unpaid..	991,705.86
625,578.13	Miscellaneous accounts payable.....	56,995.19
27,292.00	Matured interest, dividends, and rents	
1,004.16	unpaid	600,070.13
	Matured mortgage, bonded, and secured	
	debt unpaid	24,192.00
	Other working liabilities.....	1,033.33
\$1,913,162.18	Total	\$1,911,515.77
Accrued liabilities not due:		
\$118,707.57	Unmatured interest, dividends, and	
34,585.26	rents payable	\$167,210.07
	Taxes accrued	38,149.65
\$153,292.83	Total	\$205,359.72
Deferred credit items:		
\$118,604.98	Operating reserves	\$111,604.98
1,183,758.01	Other deferred credit items.....	1,270,040.81
\$1,302,362.99	Total	\$1,381,645.79
Appropriated surplus:		
\$944,663.30	Additions to property since June 30,	
	1907, through income.....	\$944,663.30
Reserves from income or surplus:		
608,335.33	Invested in sinking and redemption	
1,322,948.16	funds	639,087.47
	Not specifically invested.....	1,115,789.13
\$2,875,946.79	Total	2,699,539.90
\$3,148,484.61	Profit and loss balance.....	\$3,136,288.42
\$43,501,347.07	Grand total	\$47,568,772.27

MAINE CENTRAL RAILROAD.

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EMPLOYEES AND SALARIES—ENTIRE LINE.

Class.	Number on June 30.	Total number of days worked.	Total yearly compensation.	Average daily com- pen- sation.
General officers	12	4,380	\$92,785.95	\$21.18
Other officers	48	17,522	97,318.25	5.55
General office clerks.....	383	126,249	258,911.67	2.05
Station agents	257	84,167	185,684.50	2.21
Other station men.....	436	141,867	292,427.54	2.06
Enginemen	227	80,044	393,918.65	4.92
Firemen	224	78,526	242,026.23	3.08
Conductors	187	72,052	308,605.07	4.28
Other trainmen	435	158,307	465,333.94	2.94
Machinists	128	43,289	105,086.43	2.43
Carpenters	336	120,711	269,707.38	2.23
Other shopmen	122	38,924	93,421.41	2.40
Section foremen	238	76,411	200,269.26	2.62
Other trackmen	1,245	382,097	684,455.46	1.79
Switch tenders, crossing tenders and watchmen	176	67,043	110,161.73	1.64
Telegraph operators and dispatchers	147	51,377	128,827.45	2.51
Employees—account float- ing equipment	114	23,292	48,085.28	2.06
All other employees and laborers	858	291,305	624,522.84	2.14
Total (including gen- eral officers)	5,573	1,857,563	\$4,601,549.04	\$2.48
Less general officers....	12	4,380	92,785.95	21.18
Total (excluding gen- eral officers).....	5,561	1,853,183	\$4,508,763.09	\$2.43
Distribution of above:				
Maintenance of way and structures.....	2,041	633,404	1,309,017.79	2.07
Maintenance of equip- ment	664	243,322	563,249.29	2.31
Traffic expenses.....	39	13,257	44,549.91	3.36
Transportation expenses	2,442	870,415	2,405,662.38	2.76
General expenses.....	220	67,358	205,411.33	3.05
Outside operations.....	167	29,807	73,658.34	2.47
Total (including gen- eral officers)	5,573	1,857,563	\$4,601,549.04	\$2.48
Less general officers....	12	4,380	92,785.95	21.18
Total (excluding gen- eral officers).....	5,561	1,853,183	\$4,508,763.09	\$2.43

TRAFFIC AND MILEAGE STATISTICS—ENTIRE LINE.

Passenger traffic:

Passengers carried, earning revenue	4,147,913
Passengers carried one mile	161,050,920
Passengers carried one mile per mile of road.....	133,464
Average distance carried, miles.....	38.83
Total passenger revenue.....	\$3,517,583.22
Average amount received from each passenger.....	.84804
Average receipts per passenger per mile.....	.02184
Total passenger service train revenues.....	4,071,695.55
Passenger service train revenue per mile of road...	3,374.24
Passenger service train revenue per train mile.....	1.42964

Freight traffic:

Tons of freight, earning revenue.....	7,353,703
Tons carried one mile	708,894,306
Tons carried one mile per mile of road.....	587,465
Average distance haul of one ton, miles.....	96.40

Total freight revenue.....	\$7,440,035.07
Average amount received for each ton of freight....	1.01174
Average receipts per ton—per mile.....	.01050
Freight revenue per mile of road.....	6,165.60
Freight revenue per train mile	2.84150
Total traffic:	
Operating revenues	\$11,685,968.94
Operating revenues per mile of road	9,684.24
Operating revenues per train-mile	2.20457
Operating expenses	8,487,420.06
Operating expenses per mile of road.....	7,033.58
Operating expenses per train-mile	1.60116
Net operating revenue	3,198,548.88
Net operating revenue per mile of road.....	2,650.66
Average passengers per car-mile	17
Average passengers per train-mile	57
Average passenger cars per train-mile	4.93
Average tons of freight per loaded car-mile	16.38
Average tons of freight per train-mile	270.74
Average freight cars per train-mile.....	24.16
Average loaded cars per train-mile.....	16.53
Average empty cars per train-mile.....	6.70
Average mileage operated during year.....	1,206.70
Locomotive mileage, revenue service:	
Freight locomotive-miles	2,566,670
Passenger locomotive-miles	2,745,749
Mixed locomotive-miles	184,913
Special locomotive-miles	3,056
Switching locomotive-miles	979,629
Total revenue locomotive mileage.....	6,480,017
Nonrevenue service locomotive-miles.....	268,086
Car mileage, revenue service:	
Freight car-miles—	
Loaded	43,274,804
Empty	17,545,213
Caboose	2,440,851
Total freight car-miles.....	63,260,868
Passenger car-miles—	
Passenger	7,408,672
Sleeping, parlor, and observation	2,087,606
Other passenger-train cars....	4,538,990
Total passenger car-miles.....	14,035,268
Special car-miles—	
Freight—loaded	24,533
Caboose	2,465
Passenger	596
Total special car-miles.....	27,594
Total revenue car mileage.....	77,323,730
Nonrevenue service car-miles.....	1,397,548
Train mileage, revenue service:	
Freight train-miles	2,449,939
Passenger train-miles	2,679,649
Mixed train-miles	168,408
Special train-miles	2,788
Total revenue train mileage.....	5,300,784
Nonrevenue service train-miles.....	192,259

TRAFFIC AND MILEAGE STATISTICS—STATE OF NEW HAMPSHIRE.

Passenger traffic:	
Total passenger revenue	\$125,235.22
Total passenger service train revenue	138,507.93
Passenger service train revenue per mile of road...	1,382.73
Passenger service train revenue per train-mile ....	.79197

Freight traffic:

Total freight revenue.....	\$334,903.08
Freight revenue per mile of road.....	3,343.35
Freight revenue per train-mile	2.09047

Total traffic:

Operating revenues	477,840.18
Operating revenues per mile of road.....	4,770.29
Operating revenues per train-mile	1.52891
Operating expenses	533,614.82
Operating expenses per mile of road.....	5,327.09
Operating expenses per train-mile	1.70737
Net operating deficit	55,774.64
Net operating deficit per mile of road.....	556.80
Average number of passenger cars per train-mile...	4.47
Average number of freight cars per train-mile.....	20.37
Average number of loaded cars per train-mile.....	14.03
Average number of empty cars per train-mile.....	5.42
Average mileage operated during year.....	100.17

Locomotive mileage, revenue service:

Freight locomotive-miles	177,595
Passenger locomotive-miles	190,956
Mixed locomotive miles.....	21,504
Switching locomotive miles.....	46,722

Total revenue locomotive mileage..... 436,777

Nonrevenue service locomotive-miles..... 17,029

Car mileage, revenue service:

Freight car-miles—	
Loaded	2,247,189
Empty	868,844
Caboose	146,822

Total freight car-miles..... 3,262,855

Passenger car-miles—

Passenger	482,023
Sleeping, parlor, and observation	103,951
Other passenger-train cars.....	192,752

Total passenger car-miles..... 778,726

Total revenue car mileage..... 4,041,581

Nonrevenue service car-miles..... 99,660

Train mileage, revenue service:

Freight train-miles	138,306
Passenger train-miles.....	152,332
Mixed train-miles	21,899

Total revenue train mileage..... 312,537

Nonrevenue service train-miles..... 16,132

FREIGHT TRAFFIC MOVEMENT—ENTIRE LINE.

Commodity.	Tons originating on this road.	Tons re- ceived from connecting roads.	Total tons.	Per Cent.
Products of agriculture:				
Grain	55,342	286,123	341,465	4.65
Flour	3,976	64,551	68,527	.93
Other mill products.....	18,829	60,060	78,889	1.07
Hay	50,131	15,121	65,252	.89
Tobacco	105	711	816	.01
Cotton	3,575	21,447	25,022	.34
Fruit and vegetables....	197,664	715,680	913,344	12.42
Other products of agri- culture	7,620	7,144	14,764	.20
Total	337,242	1,170,837	1,508,079	20.51

Commodity.	Tons originating on this road.	Tons re- ceived from connecting roads.	Total tons.	Per Cent.
Products of animals:				
Live stock	20,487	8,010	28,497	.39
Dressed meats	2,041	10,961	13,002	.18
Other packing-house prod- ucts	4,450	7,192	11,642	.16
Poultry, game and fish..	11,994	3,219	15,213	.20
Wool	1,102	4,108	5,210	.07
Hides and leather	4,884	11,162	16,046	.22
Other products of ani- mals	34,381	6,960	41,341	.56
Total	79,339	51,612	130,951	1.78
Products of mines:				
Anthracite coal .....	.....	166,217	166,217	2.26
Bituminous coal .....	.....	641,797	641,797	8.73
Coke	527	6,377	6,904	.09
Ores	6,877	5,537	12,414	.17
Stone, sand and other like articles	107,827	46,715	154,542	2.10
Other products of mines	20,922	60,617	81,539	1.11
Total	136,153	927,260	1,063,413	14.46
Products of forests:				
Lumber	721,309	430,234	1,151,543	15.66
Other products of forests	893,796	369,892	1,263,688	17.18
Total	1,615,105	800,126	2,415,231	32.84
Manufactures:				
Petroleum and other oils	25,196	19,919	45,115	.61
Sugar	710	11,918	12,628	.17
Naval stores	599	548	1,147	.02
Iron, pig and bloom....	7,877	6,094	13,971	.19
Iron and steel rails....	3,329	13,982	17,311	.24
Other castings and ma- chinery	16,741	16,770	33,511	.46
Bar and sheet metal....	692	3,047	3,739	.05
Cement, brick and lime.	136,286	38,580	174,866	2.38
Agricultural implements.	1,107	3,619	4,726	.06
Wagons, carriages, tools, etc.	1,284	3,363	4,647	.06
Wines, liquors and beers	563	1,812	2,375	.03
Household goods and furniture	8,517	4,100	12,617	.17
Other manufactures	895,789	232,012	1,127,801	15.34
Total	1,098,690	355,764	1,454,454	19.78
Merchandise	319,451	237,902	557,353	7.58
Miscellaneous	128,751	95,471	224,222	3.05
Total tonnage	3,714,731	3,638,792	7,353,703	100.00

DESCRIPTION OF EQUIPMENT—ENTIRE LINE.

Item.	Number on June 30, during 1913.	Ad- ded year.	Re- tired during year.	Number on June 30, 1914.	Number fitted with Train brake.	Auto- matic coupler.
Locomotives — owned or leased:						
Passenger	75	3	...	78	78	78
Freight	121	7	9	119	119	119
Switching	24	...	...	24	24	24
Total locomotives in service	220	10	9	221	221	221
Less locomotives leased.	56	...	...	56	56	56
Total locomotives owned	164	10	9	165	165	165

Item.	Number on June 30, during 1913.	Ad- ded during year.	Re- tired during year.	Number on June 30, 1914.	Number fitted with	
					Train brake.	Auto- matic coupler.
Cars—owned or leased:						
In passenger service—						
First-class cars.....	189	...	9	180	180	180
Second-class cars....	4	...	...	4	4	4
Combination cars....	25	...	1	24	24	24
Dining cars.....	5	...	...	5	5	5
Baggage, express and postal cars	91	13	8	96	96	96
Other cars in pas- senger service.....	2	...	...	2	2	2
Total	316	13	18	311	311	311
In freight service—						
Box cars	5,402	25	124	5,303	5,303	5,303
Flat cars	1,889	125	187	1,827	1,827	1,827
Stock cars	79	...	5	74	74	74
Coal cars	1,391	177	18	1,550	1,550	1,550
Refrigerator cars....	24	...	...	24	24	24
Other cars in freight service	562	300	...	862	300	300
Total	9,437	627	334	9,640	9,078	9,078
In company's service—						
Officers' and pay cars	2	...	...	2	2	2
Gravel cars.....	30	...	...	30	30	30
Derrick cars.....	25	...	2	23	20	23
Caboose cars	109	10	5	114	114	114
Other road cars.....	506	34	49	491	415	491
Total	672	44	56	660	581	660
Total cars in service..	10,335	684	408	10,611	9,970	10,049
Less cars leased.....	1,897	...	...	1,897	1,675	1,694
Total cars owned....	8,438	684	408	8,714	8,295	8,355
Cars contributed to fast freight line service.....						
	15	...	5	10	10	10

MILEAGE OF ROAD OPERATED.

	Main line.	Branches and spurs.	Line under lease.	Line under contract.	Line under trackage rights.	Total.	New line con- structed during year.
Entire line:							
Miles of single track	203.34	441.51	549.16	.89	14.94	1,208.84	2.35
Miles of second track	58.71	.....	4.47	.....	10.79	73.97	.19
Miles of third track .....	.....	.....	.....	.....	.98	.98	.....
Miles of fourth track .....	.....	.....	.....	.....	.94	.94	.....
Miles of yard track and sidings	114.76	93.06	164.51	.....	.....	372.33	9.92
Total mileage operated.....	375.81	534.57	718.14	.89	27.65	1,657.06	12.46
State of New Hampshire:							
Miles of single track .....	.....	.....	100.17	.....	.....	100.17	.....
Miles of yard track and sidings.....	.....	.....	28.00	.....	.....	28.00	.84
Total .....	.....	.....	128.17	.....	.....	128.17	.84

RENEWALS OF RAILS AND TIES—STATE OF NEW HAMPSHIRE.

Steel rails, tons, 575.85; lbs. per yd., 67, 75, 85; av. price per ton, \$27.15

Cross ties, cedar.....	33,760	average price,	\$0.475
Switch ties, hard pine.....	1,385	average price,	1,470
Bridge and other ties, hard pine....	204	average price,	1,964
Total	35,349		\$0.522

Average pounds of fuel for locomotive-miles run, entire line, 119.19.

Average cost per ton, \$3.26.

ACCIDENTS TO PERSONS—STATE OF NEW HAMPSHIRE.

	Trainmen.		Other Employees.		Passengers.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Struck by trains, locomotives or cars.....	1	1	..	..	..	..
Falling from locomotives or cars .....	..	1	..	..	..	..
Other causes .....	..	..	..	1	..	..
Total	1	2	..	1	..	..

MANCHESTER & LAWRENCE RAILROAD.

MANCHESTER, N. H.

HISTORY.

See Report of the Public Service Commission of New Hampshire on the Investigation of Railroad Rates, page 257.

PRINCIPAL OFFICERS.

President, Calvin Page, Portsmouth, N. H.; Treasurer and Clerk of Corporation, Edward M. Brooks, Manchester, N. H.

DIRECTORS.

Calvin Page, Portsmouth, N. H.; William P. Fowler, Boston, Mass.; George E. Smith, Swampscott, Mass.; Arthur M. Heard, Manchester, N. H.; Parker W. Whittemore; Sherburn M. Merrill, Newton, Mass.; Albert Wallace Rochester, N. H.

GENERAL EXHIBIT FOR THE YEAR.

Rental received from lease of road.....	\$113,271.99
Dividends received on stocks owned:	
Concord & Montreal Railroad.....	490.00
Gross income	\$113,761.99
Expenses and charges upon income accrued during year:	
Salaries and maintenance of organization...	\$1,658.30
Interest on funded debt.....	10,960.00
Other expenses and charges upon income:	
Tie plates, B. & M. R. R.....	311.99
Total expenses and charges upon income.....	12,930.29
Net divisible income.....	\$100,831.70

Dividends declared, 10% on common stock.....	\$100,000.00
Surplus for year ending June 30, 1914.....	\$831.70
Amount of surplus June 30, 1913.....	137,564.35
Total surplus June 30, 1914.....	\$138,396.05

GENERAL BALANCE SHEET.

Assets.

Cost of road.....	\$1,000,000.00
Cost of telegraph	4,770.35
Lands in Manchester, N. H., terminals.....	274,298.53
Total permanent investments.....	\$1,279,068.88
Cash and current assets:	
Cash	\$8,686.67
Bills and accounts receivable.....	123,454.00
Total cash and current assets.....	132,140.67
Miscellaneous assets:	
Concord & Montreal stock, 70 shares.....	7,000.00
Total	\$1,418,209.55

Liabilities.

Capital stock, common.....	\$1,000,000.00
Funded debt	274,000.00
Current liabilities:	
Dividends not called for.....	5,813.50
Profit and loss balance—surplus.....	138,396.05
Total	\$1,418,209.55

CAPITAL STOCK.

Common, authorized, and outstanding:	
10,000 shares, par value.....	\$1,000,000.00
Number of stockholders, 490; number in New Hampshire, 257.	
Amount of stock held in New Hampshire.....	526,900.00

RAILROAD OWNED.

Main line, Manchester to Massachusetts State Line.....	22.39 miles
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MT. WASHINGTON RAILWAY COMPANY.

ORGANIZATION, CONTROL AND LOCATION.

Organized under Laws of New Hampshire, 1858 and 1868. The entire capital stock owned by the Concord and Montreal Railroad, leased to the Boston & Maine Railroad.

Line extends from base to summit of Mt. Washington, 3.17 miles.

PRINCIPAL OFFICERS.

Chairman and President, Benjamin A. Kimball, Concord, N. H.; Vice-President, George E. Cummings, Woodsville, N. H.; Treasurer and Clerk, John F. Webster, Concord, N. H.; Comptroller, Wm. J. Hobbs; Assistant Treasurer, Herbert E. Fisher, Boston, Mass.; Superintendent, George E. Cummings, Woodsville, N. H.

DIRECTORS.

Benjamin A. Kimball, Concord, N. H.; George E. Cummings, Woodsville, N. H.; Alvin B. Cross, Frank P. Andrews, Concord, N. H.; Wm. P. Chamberlain, Keene, N. H.; Charles H. Greenleaf, Franconia, N. H.; Warren F. Tripp, Short Falls, N. H.; Herbert B. Moulton, Lisbon, N. H.; Aretas B. Carpenter, Manchester, N. H.

INCOME ACCOUNT.

Operating revenues	\$20,262.54
Operating expenses	15,005.46
Net operating revenues	\$5,257.08
Taxes accrued	868.21
Operating income	\$4,388.87
Other income:	
Miscellaneous rents	\$5.00
Interest on securities	669.94
	674.94
Gross operating income	\$5,063.81
Dividends declared 2%	\$4,230.00
Expended for additions and betterments	6.23
Total expenditures	4,236.23
Balance for year—surplus	\$827.58

GENERAL BALANCE SHEET.

Assets.

Road and equipment	\$142,772.56
Other investment, land at summit and base of Mt. Washington	56,000.00
Cash and current assets	33,752.23
Total	\$232,524.79

Liabilities.

Capital stock, common, 2,115 shares, par value	\$211,500.00
Additions to property from surplus	2,360.37
Reserves from income or surplus	12,500.00
Profit and loss surplus	6,164.42
Total	\$232,524.79

ADDITIONAL FACTS.

Cost per mile of line (3.17 miles)	\$45,216.00
Capital stock per mile of line (3.17 miles)	66,719.00
Number of passengers carried, earning revenue	13,422.00
Average number of passengers, per car mile	31
Passenger locomotive and car mileage	1,273 miles

Length of main line, 3.17 miles; sidetrack, .17 miles; total length of track, 3.34 miles.

Equipment of road:

Passenger locomotives, 7; passenger cars, 6; flat cars, 8; other cars, 1; total cars, 15.

Gauge of track, 4 ft. 7½ inches.

NASHUA & ACTON RAILROAD.

CONCORD, N. H.

HISTORY.

See Report of the Public Service Commission on the Investigation of Railroad Rates, page 251.

PRINCIPAL OFFICERS.

President, Benjamin A. Kimball; Treasurer and Clerk of Corporation, John F. Webster, Concord, N. H.
(See Boston & Maine Railroad for other officers.)

DIRECTORS.

Benjamin A. Kimball, Harry H. Dudley, Henry A. Kimball, Concord, N. H.; William Parker Straw, Manchester, N. H.; William D. Swart, Frank W. Maynard, Nashua, N. H.; Alfred F. Howard, Portsmouth, N. H.

GENERAL BALANCE SHEET.

Assets.

Cost of road and equipment.....	\$300,000.00
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Liabilities.

Capital stock, common, 3,000 shares, par value.....	\$300,000.00
(The capital stock is all owned by the Concord & Montreal Railroad.)	

LINE AND OPERATION.

Main line in New Hampshire, \$4.98 miles; total length, 20.12 miles. Sidetrack, 3.40; total track, 23.52 miles; in New Hampshire, 8.38 miles.

The Boston & Maine Railroad operates the road, receives all earnings and pays all operating expenses and taxes, under the lease of the Concord & Montreal Railroad of June 29, 1895.

NASHUA & LOWELL RAILROAD CORPORATION.

78 DEVONSHIRE ST., BOSTON, MASS.

HISTORY.

See Report of Public Service Commission of New Hampshire on the Investigation of Railroad Rates, page 218.

PRINCIPAL OFFICERS.

President, David P. Kimball; Treasurer, John Brooks, Boston, Mass.; Clerk of Corporation, David Whiting, Wilton, N. H.

DIRECTORS.

David P. Kimball, Boston, Mass.; Alfred S. Hall, Winchester, Mass.; Edward A. Newell, Concord, Mass.; Frederick Brooks, Boston, Mass.; John Brooks, Cambridge, Mass.

GENERAL EXHIBIT FOR THE YEAR.

Rental received from lease of road.....	\$75,116.27
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Income from other sources:	
Bank interest	\$151.32
Bond interest	360.00
Rent of office at Nashua, N. H.	18.00
	<hr/>
	\$529.82
Gross income	<hr/>
	\$75,645.59
Expenses and charges upon income accrued during the year:	
Salaries and maintenance of organization..	\$1,146.23
Additions and betterments paid for by Boston & Maine Railroad through income....	2,116.27
	<hr/>
Total expenses and charges and income.....	3,262.50
	<hr/>
Net divisible income.....	\$72,383.09
Dividends declared, 9% on common stock.....	72,000.00
	<hr/>
Surplus for the year ending June 30, 1914.....	\$383.09
Amount of surplus June 30, 1913.....	160,667.95
	<hr/>
Total surplus June 30, 1914.....	\$161,051.04

GENERAL BALANCE SHEET.

Assets.

Cost of road.....	\$691,242.07
Additions and betterments.....	2,116.27
	<hr/>
Total cost of railway owned.....	\$693,358.34
Total cost of equipment owned.....	218,242.95
	<hr/>
Total permanent investments.....	\$911,601.29
Cash and current assets:	
Cash	\$1,685.02
Investments	50,070.00
	<hr/>
Total cash and current assets.....	51,755.02
	<hr/>
Total	\$963,356.31

Liabilities.

Capital stock—common	\$800,000.00
Current liabilities:	
Dividends not called for.....	189.00
Sinking and other special funds:	
Additions and betterments paid for by Boston & Maine Railroad through income.....	2,116.27
Profit and loss balance—surplus.....	161,051.04
	<hr/>
Total	\$963,356.31

CAPITAL STOCK.

Common, authorized, issued, and outstanding:	
8,000 shares, par value.....	\$800,000.00
Whole number of stockholders, 387; number in New Hampshire, 127.	
Amount of stock held in New Hampshire.....	168,900.00

RAILROAD OWNED.

	Miles.
Length of railway line.....	14.50
Length of second main track	14.50
	<hr/>
Total length of main track.....	29.00
Length of sidings, switches, etc.....	14.54
	<hr/>
Total	43.54

A double track line total length, 14.5 miles; length in New Hampshire, 5.25 miles. Second main track, 14.5; length in New Hampshire, 5.25. Total length of sidetrack, 14.54; length in New Hampshire, 5.23. Total length of track, 43.54; length in New Hampshire, 15.73.

Cities and towns in which the railway is located: Nashua, N. H., Tyngsboro, Mass., Chelmsford and Lowell, Mass.

NEW BOSTON RAILROAD COMPANY.

CONCORD, N. H.

HISTORY.

See Report of Public Service Commission of New Hampshire on the Investigation of Railroad Rates, page 270.

PRINCIPAL OFFICERS.

President, Benjamin A. Kimball; Treasurer and Clerk of Corporation, John F. Webster, Concord, N. H.

(See Boston & Maine Railroad for other officers.)

DIRECTORS.

Benjamin A. Kimball, Concord, N. H.; William J. Hoyt, Manchester, N. H.; Edward H. Wason, Nashua, N. H.; William F. Harrington, Manchester, N. H.; Frank P. Quimby, Concord, N. H.; Charles C. Goss, Dover, N. H.; John F. Webster, Concord, N. H.

GENERAL EXHIBIT FOR THE YEAR.

Rental received from lease of road.....	\$2,800.00
Dividends declared, 4% on common stock to amount of \$70,- 000 (\$14,000 no dividend).....	2,800.00
Surplus for the year.....	.....

GENERAL BALANCE SHEET.

Assets.

Cost of road.....	\$84,000.00
Other items of railway cost:	
Turntable	3,004.85
Total	\$87,004.85

Liabilities.

Capital stock	\$84,000.00
Current liabilities:	
Audited vouchers and accounts.....	3,004.85
Total	\$87,004.85

CAPITAL STOCK.

Authorized, 1000 shares, issued and outstanding:	
840 shares, par value	\$84,000.00
Whole number of stockholders, 24; number in New Hampshire, 18.	
Stock held in New Hampshire.....	\$55,600.00

LINE AND OPERATION.

Main line extends from Parker's Station to New Boston, 5.19 miles, sidetrack, .79 miles.

The Boston & Maine Railroad operates the road, receives all earnings and pays all operating expenses and taxes, under the lease of the Concord & Montreal Railroad of June 29, 1895.

NORTHERN RAILROAD.

1017 OLD SOUTH BUILDING, BOSTON, MASS.

HISTORY.

See Report of the Public Service Commission of New Hampshire on the Investigation of Railroad Rates, page 272.

PRINCIPAL OFFICERS.

President, Alvah W. Sulloway, Franklin, N. H.; Treasurer, George U. Crocker, Boston, Mass.; Clerk of Corporation, Henry W. Stevens, Concord, N. H.; Assistant Treasurer, Frank J. Sulloway, Franklin, N. H.

DIRECTORS.

Alvah W. Sulloway, Franklin, N. H.; Charles P. Chase, Hanover, N. H.; William F. Thayer, Concord, N. H.; Silas Pierce, Josiah Benton, Boston, Mass.; Edgar Crocker, Cambridge, Mass.; William F. Richards, Newport, N. H.

GENERAL EXHIBIT FOR THE YEAR.

Rental received from lease of railway.....	\$189,104.00
Interest on bonds.....	760.00
Interest on deposits.....	116.87
Gross income	<u>\$189,980.87</u>
Expenses and charges upon income accrued during year:	
Salaries and maintenance of organization.....	4,603.17
Net divisible income.....	\$185,377.70
Dividends declared, 6%, on common stock.....	<u>184,104.00</u>
Surplus for the year ending June 30, 1914.....	\$1,273.70
Amount of surplus June 30, 1913.....	<u>20,122.39</u>
Total surplus June 30, 1914.....	<u>\$21,396.09</u>

GENERAL BALANCE SHEET.

Assets.

Cost of road.....	\$3,068,400.00
Cash and current assets:	
Cash	\$4,498.35
Bonds of Concord & Claremont (N. H.)	
Railroad 4½s	10,000.00
Bonds of American Telephone & Telegraph Co. 4s	<u>8,975.00</u>
Total cash and current assets.....	<u>23,473.35</u>
Total	<u>\$3,091,873.35</u>

Liabilities.

Capital stock, common.....	\$3,068,400.00
Current liabilities:	
Dividends not called for.....	2,077.26
Profit and loss balance—surplus.....	<u>21,396.09</u>
Total	<u>\$3,091,873.35</u>

CAPITAL STOCK.

Common, authorized and outstanding:	
30,684 shares, par value.....	\$3,068,400.00
Number of stockholders, 1,869; number in New Hampshire, 1,120.	
Stock held in New Hampshire.....	1,743,700.00

RAILROAD OWNED.

Main line, 82.91 miles; in New Hampshire, 82.67 miles. Sidings, etc., 26.69; in New Hampshire, 26.04. Total line, 109.60; in New Hampshire, 108.71.

PEMIGEWASSET VALLEY RAILROAD.

CONCORD, N. H.

HISTORY.

See Report of the Public Service Commission of New Hampshire on the Investigation of Railroad Rates, page 262.

PRINCIPAL OFFICERS.

President, Benjamin A. Kimball; Treasurer, John F. Webster, Concord, N. H.; Clerk of Corporation, Rodney E. Smythe, Plymouth, N. H.
(See Boston & Maine Railroad for other officers.)

DIRECTORS.

Benjamin A. Kimball, Concord, N. H.; Nathan P. Hunt, Manchester, N. H.; John T. Busiel, Laconia, N. H.; Fred P. Weeks, Plymouth, N. H.; James E. French, Moultonboro, N. H.; John F. Webster, Concord, N. H.; George E. Henry, Lincoln, N. H.; Samuel K. Bell, Exeter, N. H.; George J. Bowles, Plymouth, N. H.

GENERAL EXHIBIT FOR THE YEAR.

Rental received from lease of road.....	\$32,790.00
Expenses and charges upon income accrued during the year:	
Salaries and maintenance of organization.....	303.60
Net divisible income.....	\$32,486.40
Dividends declared, 6% on common stock.....	32,490.00
Deficit for the year ending June 30, 1914.....	\$3.60
Surplus June 30, 1913.....	690.52
Total surplus June 30, 1914.....	\$686.92

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:	
Cost of road and equipment.....	\$588,632.31
Cash	924.80
Total	\$589,557.11

Liabilities.

Capital stock, common.....	\$541,500.00
Miscellaneous accrued liabilities:	
Concord & Montreal Railroad for improvements.....	47,370.19
Profit and loss balance—surplus.....	686.92
Total	\$589,557.11

PROPERTY ACCOUNTS.

Additions to railway, bridges	\$688.90
Additions to lands and buildings.....	4,568.32
Net additions to property accounts for the year.....	\$5,257.22

CAPITAL STOCK.

Common: authorized, 20,000 shares; issued and outstanding, 5,415 shares, par value.....	\$541,500.00
Whole number of stockholders, 185; number in New Hampshire, 129.	
Stock held in New Hampshire.....	358,700.00

RAILROAD OWNED.

Main line, from Plymouth to Lincoln, 22.93 miles; sidetrack, 12.25; total length of track, 35.18 miles.

PETERBOROUGH RAILROAD.

NASHUA.

HISTORY.

See Report of the Public Service Commission of New Hampshire on the Investigation of Railroad Rates, page 223.

PRINCIPAL OFFICERS.

President, Henry A. Cutter; Treasurer, Arthur G. Shattuck; Clerk of Corporation, Charles E. Congdon; Auditor, William E. Spalding, Nashua, N. H.

AUDITORS.

Henry A. Cutter, Ben E. Burns, Lester F. Thurber, George N. Andrews, Nashua, N. H.; Thomas B. Eaton, Worcester, Mass.

GENERAL EXHIBIT FOR THE YEAR.

Rental received from lease of road.....	\$15,700.00
Interest on deposit.....	194.03
Additional rental account:	
Additions to property made by Boston & Maine R. R.....	134.75
Gross income	\$16,028.78
Expenses and charges upon income accrued during year:	
Salaries and maintenance of organization....	\$548.84
Other expenses and charges upon income:	
Additions to property through income.....	134.75
Total expenses and charges upon income.....	683.59
Net divisible income.....	\$15,345.19
Dividends declared, 4% on common stock.....	15,400.00
Deficit for year ending June 30, 1914.....	54.81
Amount of surplus June 30, 1913.....	215,611.72
Total surplus June 30, 1914.....	\$215,556.91

GENERAL BALANCE SHEET.

Assets.

Cost of road.....	\$605,200.59
Improvements by Boston & Maine Railroad.....	27,126.73
Total cost of property owned.....	<u>\$632,327.32</u>
Total cash and current assets.....	5,362.91
Total	<u>\$637,690.23</u>

Liabilities.

Capital stock, common.....	\$385,000.00
Sinking and other special funds:	
Additions to property through income.....	\$10,006.59
Boston & Maine Railroad improvement ac-	
count	<u>27,126.73</u>
Total sinking and other special funds.....	37,133.32
Profit and loss balance—surplus.....	215,556.91
Total	<u>\$637,690.23</u>

CAPITAL STOCK.

Common: authorized, 6,000 shares; issued and outstand-	
ing, 3,850 shares, par value.....	\$385,000.00
Whole number of stockholders, 320; number in New	
Hampshire, 269.	
Stock held in New Hampshire.....	301,000.00

RAILROAD OWNED.

Main line, from Wilton to Greenfield.....	10.50 miles
Sidetrack	<u>1.40</u>
Total length of track.....	11.90 miles

PETERBOROUGH AND HILLSBOROUGH RAILROAD.

1023 OLD SOUTH BUILDING, BOSTON, MASS.

HISTORY.

See Report of the Public Service Commission of New Hampshire on the Investigation of Railroad Rates, page 279.

PRINCIPAL OFFICERS.

President, Alvah W. Sulloway, Franklin, N. H.; Treasurer, George U. Crocker, Boston, Mass.; Clerk of Corporation, Thomas F. Clifford; Assistant Treasurer, Frank J. Sulloway, Franklin, N. H.

DIRECTORS.

Alvah W. Sulloway, Franklin, N. H.; William P. Fiske, Concord, N. H.; James W. Pattee, Enfield, N. H.; Kenson E. Dearborn, Bristol, N. H.; Sherburne J. Winslow, Pittsfield, N. H.; Dudley L. Furber, Dover, N. H.; Herbert A. Trull, Manchester, N. H.

GENERAL EXHIBIT FOR THE YEAR.

Rental received from lease of road.....	\$4,500.00
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SULLIVAN COUNTY RAILROAD.

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Expenses and charges upon income accrued during year:	
Interest on funded debt.....	\$4,500.00
Net divisible income.....	.....
Deficit for year ending June 30, 1913.....	120,583.83
Amount of deficit June 30, 1914.....	.....
Total deficit June 30, 1914.....	\$120,583.83

GENERAL BALANCE SHEET.

Assets.

Cost of road.....	\$209,298.44
Cash and current assets.....	925.00
Profit and loss balance—deficit.....	120,583.83
Total	\$330,807.27

Liabilities.

Capital stock, common.....	\$45,000.00
Funded debt	165,000.00
Current liabilities:	
Matured interest coupons unpaid (including	
coupons due July 1).....	\$112,181.25
Gratuity	8,626.02
Total current liabilities.....	120,807.27
Total	\$330,807.27

CAPITALIZATION.

Common, authorized and outstanding:	
450 shares, par value.....	\$45,000.00
All stock held by Northern Railroad:	
First mortgage bonds, \$100,000, received 4½% inter-	
est. Second mortgage, \$65,000, no interest paid	
during year.	

RAILROAD OWNED.

Main line	18.51 miles
Sidetrack	2.02 miles
Total length of track.....	20.53 miles

SULLIVAN COUNTY RAILROAD.

HISTORY.

Original corporation "Sullivan Railroad," incorporated July 10, 1846, in New Hampshire. Reorganized September 3, 1866, as the Sullivan County Railroad. It is under direct control of the Boston & Maine Railroad. Control established through ownership of the entire capital stock by the Vermont Valley Railroad, which latter road is controlled by the Boston & Maine Railroad.

PRINCIPAL OFFICERS.

President, Henry W. Keyes, Haverhill, N. H.; Treasurer and Clerk, John F. Webster, Concord, N. H.; Comptroller, Wm. J. Hobbs, Boston, Mass.; Assistant Treasurer, Herbert E. Fisher, Boston, Mass.; Superintendent, H. E. Folsom, Lyndonville, Vt.; General Freight and Passenger Agent, Charles M. Burt, Boston, Mass.

DIRECTORS.

Henry W. Keyes, Haverhill, N. H.; George H. Stowell, Claremont, N. H.; George E. Anderson, Nashua, N. H.; Henry E. Folsom, Lyndonville, Vt.; Fred L. Thompson, Bellows Falls, Vt.; Charles M. Floyd, Manchester, N. H.; Frank P. Maynard, Claremont, N. H.

CAPITAL STOCK.

Common, authorized, and outstanding:	
5,000 shares, par value.....	\$500,000.00
Dividends declared during the year, 8%.....	40,000.00
Issued for cash:	
Total number of shares, 5,000.	
Total cash realized	500,000.00

FUNDED DEBT.

First mortgage bonds:	
Total par value authorized, outstanding, and not held by respondent	\$357,000.00
Interest paid during the year and charged to income....	14,280.00
Issued for cash.....	357,000.00
Total cash realized.....	349,860.00

CAPITALIZATION.

Capital stock per mile of line.....	\$19,231.00
Funded debt (mortgage) per mile of line.....	13,731.00
Total	\$32,962.00

ROAD AND EQUIPMENT.

Account.	Additions and betterments during year.	Total Expenditures July 1, 1907, to June 30, 1913.	Total Expenditures July 1, 1907, to June 30, 1914.
Road:			
Engineering	\$459.64	\$379.52	\$839.16
Right of way and station grounds	170.26	.....	170.26
Grading	1,076.80	4,057.19	5,133.99
Bridges, trestles and culverts	243.70	87,575.54	87,819.24
Ties	2,294.91	1,072.91	3,367.82
Rails	4,041.53	3,611.11	7,652.64
Frogs and switches....	1,054.80	510.51	1,565.31
Track fastenings and other material	1,985.28	292.82	2,278.10
Ballast	4,072.45	1,139.21	5,211.66
Track laying and surfacing	1,761.69	1,006.35	2,768.04
Crossings and signs....	.....	2,201.94	2,201.94
Interlocking and other signal apparatus	60.15	35,861.57	35,921.72
Shops, enginehouses and turntables	40.08	.....	40.08
Water stations	852.99	9,460.30	10,313.29
Fuel stations	10,010.12	.....	10,010.12
Miscellaneous structures .....	.....	1,488.02	1,488.02
Total	\$28,124.40	\$145,680.95	\$173,805.35
Equipment:			
Steam locomotives.....	.....	\$16,500.00	\$16,500.00
Passenger-train cars ...	12,222.77	.....	12,222.77
Freight-train cars.....	2,669.15	77,267.56	74,598.41
Total	\$9,553.62	\$93,767.56	\$103,321.18
Recapitulation:			
Road	\$28,124.40	\$145,680.95	\$173,805.35
Equipment	9,553.62	93,767.56	103,321.18
Total	\$37,678.02	\$239,448.51	\$277,126.53

SUMMARY OF ROAD AND EQUIPMENT.

Investment to June 30, 1907:	
Road	\$888,755.37
Equipment	98,175.10
Investment since June 30, 1907.....	277,126.53
Total	<u>\$1,264,057.00</u>
Reserve for accrued depreciation—Cr.....	82,017.78
Net total	<u>\$1,182,039.22</u>
Cost per mile of line (26 miles).....	45,463.04

INCOME ACCOUNT.

Operating income:		
Operating revenues		\$547,281.85
Operating expenses		<u>420,259.47</u>
Net operating revenue.....		\$127,022.38
Taxes accrued.....		<u>15,924.11</u>
Operating income.....		<u>\$111,098.27</u>
Other income:		
Rents—Credits—		
Joint facilities	\$88.00	
Miscellaneous rents	<u>686.74</u>	
Total other income.....		<u>774.74</u>
Gross corporate income.....		<u>\$111,873.01</u>
Deductions from gross corporate income:		
Rents—Debits—		
Hire of equipment.....	\$3,233.64	
Joint facilities	<u>2,685.62</u>	
Miscellaneous rents	578.74	
Interest accrued on funded debt.....	<u>14,280.00</u>	
Total deductions		<u>20,778.00</u>
Net corporate income.....		<u>\$91,095.01</u>
Disposition of net corporate income:		
Dividends declared on common stock—		
4% payable October 2, 1912.....	\$20,000.00	
4% payable April 1, 1913.....	<u>20,000.00</u>	
		<u>40,000.00</u>
Balance for year to credit of profit and loss.....		<u>\$51,095.01</u>

PROFIT AND LOSS ACCOUNT.

Balance June 30, 1913.....	\$390,826.44
Balance for year, from income account.....	<u>51,095.01</u>
Balance credit, June 30, 1914.....	<u>\$441,921.45</u>

OPERATING REVENUES—ENTIRE LINE AND STATE.

Revenue from transportation:		
Freight revenue		\$368,556.57
Passenger revenue	\$151,716.36	
Excess baggage revenue.....	<u>2,180.42</u>	
Mail revenue	10,952.11	
Express revenue	6,000.00	
Milk revenue (on passenger trains).....	3,807.60	
Other passenger-train revenue.....	<u>17.93</u>	
Total passenger service train revenue.....		<u>174,674.42</u>

Switching revenue	\$1,742.32
Special service train revenue.....	78.00
Miscellaneous transportation revenue.....	159.67
Total revenue from transportation.....	<u>\$545,210.98</u>
Revenue from operations other than transportation:	
Station and train privileges.....	\$2.22
Storage—freight	117.59
Storage—baggage	156.80
Car service	1,464.41
Telegraph and telephone service.....	143.85
Rents of buildings and other property.....	186.00
Total revenue from operations other than transportation	<u>\$2,070.87</u>
Total operating revenues—entire line.....	<u>\$547,281.85</u>
OPERATING EXPENSES—ENTIRE LINE AND STATE.	
Maintenance of way and structures:	
Superintendence	\$1,670.19
Maintenance of roadway and track.....	88,014.20
Maintenance of track structures	7,003.99
Maintenance of buildings, docks and wharves.....	5,039.14
Other maintenance of way and structures expenses.....	521.02
Maintaining joint tracks, yards and other facilities—Dr.	1,500.00
Maintaining joint tracks, yards and other facilities—Cr.	132.00
Total—maintenance of way and structures.....	<u>\$103,616.54</u>
Maintenance of equipment:	
Superintendence	\$777.68
Locomotives—repairs	25,157.86
Cars—repairs	45,475.06
Equipment—renewals	313.95
Equipment—depreciation	10,784.66
Other maintenance of equipment expenses.....	268.29
Total—maintenance of equipment.....	<u>\$82,149.60</u>
Traffic expenses:	
Traffic expenses	<u>\$1,895.26</u>
Transportation expenses:	
Superintendence and dispatching trains.....	4,004.47
Station service	20,276.99
Yard enginemen	2,374.36
Other yard employees.....	7,874.12
Fuel for yard locomotives.....	3,885.75
All other yard expenses.....	1,008.81
Operating joint yards and terminals—Dr.....	1,731.81
Road enginemen and motormen.....	39,695.05
Fuel for road locomotives.....	84,455.89
Other road locomotive supplies and expenses.....	8,500.96
Road trainmen	40,578.63
Train supplies and expenses.....	2,976.24
Loss and damage.....	.92
Other casualties	774.40
All other transportation expenses.....	8,992.12
Total—transportation expenses	<u>\$227,130.52</u>
General expenses:	
Administration	\$4,155.87
Insurance	948.95
Other general expenses.....	362.73
Total—general expenses	<u>\$5,467.55</u>

Recapitulation of expenses:	
Maintenance of way and structures.....	\$103,616.54
Maintenance of equipment	82,149.60
Traffic expenses	1,895.26
Transportation expenses	227,130.52
General expenses	5,467.55

Total operating expenses.....	\$420,259.47
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Ratio of operating expenses to operating revenues, 76.79%.

RENTS RECEIVABLE.

Joint Facilities.

Joint yards, and terminals:

Claremont Junction, N. H., Boston & Maine Railroad lessee	\$88.00
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Miscellaneous Rents.

Buildings, and lessees:	Gross Rents.
North Walpole, N. H., F. Murphy.....	\$120.00
Walpole, N. H., C. W. Crowley.....	120.00
Walpole, N. H., J. Bowen	60.00
Windsor, Vt., L. S. Coburn.....	211.92
Windsor, Vt., A. Sanders	90.00
North Walpole, N. H., T. Elward.....	108.00
North Charlestown, N. H., P. Suprient.....	48.00
Various	231.89
Total	\$989.81
Expenses	303.07
Amount	\$686.74

RENTS PAYABLE.

Joint Facilities.

Joint yards and terminals:

Windsor, Vt., Central Vermont Railway, lessor.....	\$2,114.62
Bellows Falls, Vt., Rutland Railroad, lessor.....	571.00

Total	\$2,685.62
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Miscellaneous Rents.

Land, Bellows Falls, Vt., various lessors.....	\$578.74
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HIRE OF EQUIPMENT.

Equipment Interchanged.

	Days.	Rate.	Miles.	Rate.	Amount.
Equipment borrowed:					
Passenger - train cars			495,569	1½c to 4c	\$16,629.30
Freight-train cars	43,085	30c to 50c	894,117	.6c to 1c	25,492.74
Total	43,085		1,389,686		\$42,122.04
Equipment loaned:					
Passenger - train cars			74,118	4c	2,964.72
Freight-train cars	82,752	20c to 50c	567,060	.6c	39,804.42
Total	82,752		641,178		\$42,769.14
Private cars:					
Parlor and sleeping cars.....			157,054	2c	3,141.08
Freight cars....			93,387	.6c to 1c	739.60
Total			250,441		\$3,880.74
Total payable					\$46,002.78
Total receivable					42,769.14
Balance payable					\$3,233.64

TAXES AND ASSESSMENTS.

Ad valorem tax on value of real and personal property in New Hampshire	\$15,026.78
On property owned, not used in operation, and miscellaneous, in New Hampshire	104.23
Internal revenue, U. S. government	743.10
Specific tax on stocks, bonds, loans, etc., in Vermont	50.00
Total	\$15,924.11

COMPARATIVE GENERAL BALANCE SHEET.

Assets.

June 30, 1913.		June 30, 1914.
	Property investment:	
	Investment to June 30, 1907—	
\$888,755.37	Road	\$888,755.37
98,175.10	Equipment	98,175.10
<u>\$986,930.47</u>		<u>\$986,930.47</u>
	Investment since June 30, 1907—	
\$145,680.95	Road	\$173,805.35
93,767.56	Equipment	103,321.18
<u>\$239,448.51</u>		<u>\$277,126.53</u>
\$1,226,378.98		\$1,264,057.00
71,807.51	Reserve for accrued depreciation—Cr.	82,017.78
<u>\$1,154,571.47</u>	Total	<u>\$1,182,039.22</u>
	Working assets:	
\$228,000.30	Miscellaneous accounts receivable	\$251,659.72
<u>\$52,079.42</u>	Deferred debit items:	
	Other deferred debit items	52,079.42
<u>\$1,434,651.19</u>	Grand total	<u>\$1,485,778.36</u>

Liabilities.

June 30, 1913.		June 30, 1914.
	Stock:	
\$500,000.00	Common stock, not held by company...	\$500,000.00
	Mortgage, bonded, and secured debt:	
357,000.00	Mortgage bonds, not held by company	357,000.00
	Accrued liabilities not due:	
3,570.00	Unmatured interest, dividends, and rents payable	3,570.00
	Deferred credit items:	
1,623.86	Other deferred credit items	1,656.02
	Appropriated surplus:	
181,630.89	Additions to property since June 30, 1907, through income	181,630.89
390,826.44	Profit and loss—balance	441,921.45
<u>\$1,434,651.19</u>	Grand total	<u>\$1,485,778.36</u>

EMPLOYEES AND SALARIES—ENTIRE LINE.

Class.	Number on June 30.	Total number of days worked.	Total yearly compensation.	Average daily compen- sation.
General officers.....	3	939	\$3,800.00	\$4.05
General office clerks....	7	2,168	3,742.78	1.73
Station agents.....	7	2,258	5,703.04	2.53
Other station men.....	60	6,293	12,011.27	1.91
Enginemen	31	5,422	25,105.10	4.63
Firemen	31	5,422	17,708.15	3.27
Conductors	34	3,137	15,903.47	5.07
Other trainmen.....	83	6,175	23,465.67	3.80
Machinists	5	1,866	5,260.01	2.82
Carpenters	5	1,289	3,499.98	2.72
Other shopmen.....	20	7,404	17,665.76	2.39
Section foremen.....	6	2,378	6,817.10	2.87
Other trackmen.....	42	21,136	37,219.07	1.76
Switch tenders, crossing tenders, and watchmen.	14	1,784	3,649.42	2.05
Telegraph operators and dispatchers	10	2,495	4,428.72	1.78
All other employees and laborers	4	978	1,839.47	1.88
Total (including gen- eral officers).....	362	71,144	\$187,819.01	\$2.64
Less general officers...	3	939	3,800.00	4.05
Total (excluding gen- eral officers).....	359	70,205	\$184,019.01	\$2.62
Distribution of above:				
Maintenance of way and structures	50	25,505	47,578.56	1.87
Maintenance of equip- ment	21	8,487	21,052.92	2.48
Traffic expenses	3	939	1,680.00	1.79
Transportation expenses	281	34,130	114,006.51	3.34
General expenses.....	7	2,083	3,501.02	1.68
Total (including gen- eral officers).....	362	71,144	\$187,819.01	\$2.64
Less general officers...	3	939	3,800.00	4.05
Total (excluding gen- eral officers).....	359	70,205	\$184,019.01	\$2.62

TRAFFIC AND MILEAGE STATISTICS—ENTIRE LINE.

Passenger traffic:

Number of passengers carried, earning revenue	341,175
Number of passengers carried one mile	6,554,688
Number of passengers carried one mile per mile of road	252,103
Average distance carried, miles.....	19.21
Total passenger revenue.....	\$151,716.36
Average amount received from each passenger.....	.44468
Average receipts per passenger per mile.....	.02315
Total passenger service train revenue.....	174,674.42
Passenger service train revenue per mile of road.....	6,718.24
Passenger service train revenue per train mile	1.58391

Freight traffic:

Number of tons carried of freight earning revenue....	2,199,765
Number of tons carried one mile	54,613,138
Number of tons carried one mile per mile of road....	2,100,505
Average distance haul of one ton, miles.....	24.83
Total freight revenue.....	\$368,556.57
Average amount received for each ton of freight.....	.16754
Average receipts per ton per mile.....	.00674
Freight revenue per mile of road.....	14,175.25
Freight revenue per train-mile	2.08598

Total traffic:

Operating revenues	\$547,281.85
Operating revenues per mile of road.....	21,049.31
Operating revenues per train-mile	1.90583
Operating expenses	420,259.47
Operating expenses per mile of road.....	16,163.82
Operating expenses per train-mile	1.46349
Net operating revenue	127,022.38
Net operating revenue per mile of road.....	4,885.47
Average number of passengers per car-mile	14
Average number of passengers per train-mile	59
Average number of passenger cars per train-mile.....	6.15
Average number of tons of freight per loaded car-mile	18.87
Average number of tons of freight per train-mile	309.10
Average number of freight cars per train-mile.....	23.91
Average number of loaded cars per train-mile.....	16.37
Average number of empty cars per train-mile.....	6.53
Average mileage operated during year.....	26.00

Locomotive mileage:

Revenue service—

Freight locomotive-miles	179,448
Passenger locomotive-miles	111,382
Special locomotive-miles	227
Switching locomotive-miles	27,209

Total revenue locomotive mileage..... 318,266

Nonrevenue service locomotive-miles 11,466

Car mileage:

Revenue service—

Freight car-miles

Loaded	2,894,021
Empty	1,155,002
Caboose	176,959

Total freight car-miles..... 4,225,982

Passenger car-miles—

Passenger	292,769
Sleeping, parlor, and observation... 5	150,318
Other passenger-train cars.....	235,618

Total passenger car-miles..... 678,705

Special car-miles—

Freight—loaded	513
Caboose	66
Passenger	1,141
Other passenger-train cars.....	157

Total special car-miles..... 2,027

Total revenue car mileage..... 4,906,714

Non-revenue service car-miles..... 78,938

Train mileage:

Revenue service—

Freight train-miles	176,682
Passenger train-miles	110,280
Special train-miles	199

Total revenue train mileage..... 287,161

Nonrevenue service train-miles..... 11,450

FREIGHT TRAFFIC MOVEMENT—ENTIRE LINE.

Commodity.	Tons originating on this road.	Tons received from other roads.	Total tons.	Per cent.
Products of agriculture:				
Grain	509	99,488	99,997	4.55
Flour	298	35,999	36,297	1.65
Other mill products...	242	55,729	55,971	2.54
Hay	100	59,198	59,298	2.69
Tobacco .....	.....	2,590	2,590	.12
Cotton .....	.....	3,138	3,138	.15
Fruit and vegetables..	342	6,843	7,185	.33
Other products of agri- culture	443	22,555	22,998	1.05
Total	1,934	285,540	287,474	13.08
Products of animals:				
Live stock	1,008	4,605	5,613	.26
Dressed meats	4	2,423	2,427	.11
Other packing-house products	60	1,284	1,344	.06
Poultry, game and fish .....	.....	3,668	3,668	.17
Wool	1,163	1,230	2,393	.11
Hides and leather.....	173	7,745	7,918	.36
Other products of ani- mals	24	5,703	5,727	.26
Total	2,432	26,658	29,090	1.33
Products of mines:				
Anthracite coal .....	.....	122,080	122,080	5.55
Bituminous coal .....	.....	459,359	459,359	20.88
Coke .....	.....	5,225	5,225	.24
Ores .....	.....	20,434	20,434	.93
Stone, sand and other like articles	172	126,366	126,538	5.75
Other products of mines	336	39,295	39,631	1.80
Total	508	772,759	773,267	35.15
Products of forests:				
Lumber	6,399	124,881	131,280	5.97
Other products of for- ests	1,129	308,020	309,149	14.05
Total	7,528	432,901	440,429	20.02
Manufactures:				
Petroleum and other oils .....	.....	12,740	12,740	.58
Sugar .....	.....	133,449	133,449	6.07
Naval stores	1	1,094	1,095	.05
Iron, pig and bloom..	688	11,369	12,057	.55
Iron and steel rails...	271	15,904	16,175	.74
Other castings and ma- chinery	5,029	18,130	23,159	1.05
Bar and sheet metal...	412	1,601	2,013	.09
Cement, brick and lime	143	53,480	53,623	2.43
Agricultural implements	9	800	809	.04
Wagons, carriages, tools, etc.	74	1,674	1,748	.08
Wines, liquors and beers	33	1,480	1,513	.07
Household goods and furniture	231	2,991	3,222	.15
Other manufactures...	7,291	187,267	194,558	8.84
Total	14,182	441,979	456,161	20.74
Merchandise	4,322	116,806	121,128	5.50
Miscellaneous	9,862	82,354	92,216	4.18
Total tonnage.....	40,768	2,158,997	2,199,765	100.00

DESCRIPTION OF EQUIPMENT—ENTIRE LINE.

Item.	Number June 30, 1913.	Number retired during year.	Added during year.	Number June 30, 1914.
Locomotives—owned:				
Passenger	6	...	...	6
Freight	5	...	...	5
Total in service.....	11	...	...	11
Cars—owned or leased:				
Baggage, express, or postal..	1	...	1	2
Freight service:				
Box cars	353	5	...	348
Total cars owned.....	354	6	1	350

All locomotives and cars are equipped with train brakes and automatic couplers.

MILEAGE.

Miles of single track, main line, 26; second track, 17.07.

Yard track and sidings, 7.80; total, 50.87 miles.

Main line in New Hampshire, 25.19; miles in Vermont, .81 miles.

RENEWALS OF RAILS AND TIES—ENTIRE LINE.

Steel rails, .597 tons; 75 to 85 lbs. per yard; cost per ton, \$31.06

Cross ties (various) number	49,975	cost	0.69
Switch ties (60 ft. hard pine)	974	cost	1.22

Total	50,949	average cost	\$0.70
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CONSUMPTION OF FUEL BY LOCOMOTIVES.

	Bituminous.	Miles run.	Average per pounds mile.
Revenue service:			
Freight	11,437	179,448	127.47
Passenger	5,958	111,382	106.98
Special	11	227	96.91
Switching	1,301	27,209	96.36
Nonrevenue service	529	11,466	92.27
Total	19,236	329,732	116.68

Average cost per ton at distribution point, \$3.90.

CHARACTERISTICS OF ROAD—ENTIRE LINE.

Bellows Falls, Vt., to Windsor, Vt., 26 miles; 35 curves; total length of curve, 10 miles. Length of level line, 8.66. Number of ascending grades, 9. Sum of ascents, 267 feet. Length of ascending grades, 9.64 miles. Number of descending grades, 8. Sum of descents, 277 feet. Length of descending grades, 7.7 miles.

Bridges.	Number.	Minimum length.	Maximum length.	Aggregate length.
Stone	2	15	28	43
Iron	12	14	698	2,215
Trestles	2—height above rail 17.10 feet.			
Gauge of track, 4 ft., 8½ inches.				

TELEGRAPH.

26 miles of line, 223.98 miles of wire, owned and operated by Western Union Telegraph Company.

ACCIDENTS TO PERSONS.

Included in report of the Boston & Maine Railroad.

SUNCOOK VALLEY RAILROAD.

MANCHESTER, N. H.

HISTORY.

See Report of the Public Service Commission of New Hampshire on the Investigation of Railroad Rates, page 255.

PRINCIPAL OFFICERS.

President, James B. Tennant, Concord, N. H.; Treasurer, Walter M. Parker; Clerk of Corporation, Nathan P. Hunt, Manchester, N. H.

DIRECTORS.

James B. Tennant, Concord, N. H.; Eugene S. Head, Hooksett, N. H.; Alfred Quimby, Frank W. Sargeant, Charles C. Hayes, Manchester, N. H.; George W. Fowler, Pembroke, N. H.; Sherburne J. Winslow, Pittsfield, N. H.

GENERAL EXHIBIT FOR THE YEAR.

Rental received from lease of road.....	\$10,551.00
Total expenses and charges upon income.....	374.65
Net divisible income.....	\$10,176.35
Dividends declared, 3%, on common stock.....	10,251.00
Deficit for year ending June 30, 1914.....	74.65
Amount of surplus June 30, 1913.....	9,127.28
Total surplus June 30, 1914.....	\$9,052.63

GENERAL BALANCE SHEET.

Assets.

Cost of road.....	\$348,199.19
Cash and current assets:	
Cash	2,553.44
Total	\$350,752.63

Liabilities.

Capital stock, common.....	\$341,700.00
Profit and loss balance—surplus.....	9,052.63
Total	\$350,752.63

CAPITAL STOCK.

Common: authorized, 5,000 shares; issued and outstanding, 3,417 shares, par value.....	\$341,700.00
Whole number of stockholders, 192; number in New Hampshire, 168.	
Amount of stock held in New Hampshire.....	310,100.00

RAILROAD OWNED.

Main line, Suncook to Pittsfield, in New Hampshire.....	17.41 miles
Sidetrack	3.56
Total length of track.....	20.97 miles

UPPER COOS RAILROAD.

110 STATE ST., BOSTON, MASS.

PRINCIPAL OFFICERS.

President and General Counsel, Irving W. Drew, Lancaster, N. H.;
Treasurer, Thomas S. McGowan, Boston, Mass.; Clerk of Corporation,
Chester B. Jordan, Lancaster, N. H.; General Manager, Morris McDonald,
Portland, Me.; Superintendent, Frank J. Runey, Lancaster, N. H.

DIRECTORS.

Irving W. Drew, Lancaster, N. H.; Parker W. Whitemore, Sherburne
M. Merrill, Newton, Mass.; Calvin Page, Portsmouth, N. H.; Thomas H.
VanDyke, Beecher Falls, Vt.; Pitt F. Drew, Thomas S. McGowan, Boston,
Mass.

GENERAL EXHIBIT FOR THE YEAR.

Rental received from lease of road.....	\$66,685.00
Expenses and charges upon income accrued during the year:	
Salaries and maintenance of organization....	\$500.00
Interest on funded debt.....	45,185.00
	<hr/>
Total expenses and charges upon income.....	45,685.00
	<hr/>
Net divisible income.....	\$21,000.00
Dividends declared, 6% on common stock.....	21,000.00

GENERAL BALANCE SHEET.

Assets.

Coös Valley Railroad Company.....	\$231,673.00
Upper Coös Railroad, Vermont.....	29,407.00
Cost of road	900,398.12
Cost of equipment	231,521.88
	<hr/>
Total	\$1,393,000.00

Liabilities.

Capital stock, common.....	\$350,000.00
Funded debt	1,043,000.00
	<hr/>
Total	\$1,393,000.00

CAPITAL STOCK.

Common, authorized, issued and outstanding:	
3,500 shares, par value.....	\$350,000.00
Whole number of stockholders, 45; number in New Hampshire, 12.	
Amount of stock held in New Hampshire.....	116,600.00

WILTON RAILROAD COMPANY.

NASHUA, N. H.

HISTORY.

See Report of the Public Service Commission of New Hampshire on the Investigation of Railroad Rates, page 222.

PRINCIPAL OFFICERS.

President, George O. Whiting, Lexington, Mass.; Treasurer, Harry W. Ramsdell, Nashua, N. H.; Clerk of Corporation, Isaac S. Whiting, Wilton, N. H.

DIRECTORS.

George O. Whiting, Lexington, Mass.; Charles A. Burns, Somerville, Mass.; William E. Spalding, Nashua, N. H.; George Whiting, Somerville, Mass.; Arthur D. Ramsdell, Nashua, N. H.

GENERAL EXHIBIT FOR THE YEAR.

Rental received from lease of road.....	\$20,400.00
Dividends declared, 8½% on common stock.....	20,400.00
Surplus for year ending June 30, 1914.....	.....

GENERAL BALANCE SHEET.

Assets.

Cost of road.....	\$228,352.82
Total cost of land and buildings owned.....	14,247.18
Cash	3,772.75
Total	\$246,372.75

Liabilities.

Capital stock, common	\$240,000.00
preferred	2,600.00
Total capital stock.....	\$242,600.00
Current liabilities:	
Dividends not called for.....	\$2,772.75
Contingent reserve	1,000.00
Total current liabilities.....	3,772.75
Total	\$246,372.75

CAPITAL STOCK.

Common: authorized, 2,500 shares; issued and outstanding, 2,400 shares, par value.....	\$240,000.00
Number of stockholders, 201; number in New Hampshire, 166.	
Amount of stock held in New Hampshire.....	178,870.00

RAILROAD OWNED.

Main line, Nashua to Wilton.....	15.50 miles
Sidetrack	5.55
Total length of track.....	21.05 miles

SUMMARY OF STEAM RAILROAD ACCIDENTS.

Year ending June 30.	Passen- gers.		Em- ployees.		Travelers at grade cross- ings.		Tres- pass- ers.		Others.		Total.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1904	1	9	14	17	3	..	17	1	4	1	39	28
1905 .....	..	9	11	28	2	2	20	7	..	5	33	51
1906	1	5	7	34	6	3	26	12	..	1	40	55
1907 .....	..	6	15	33	3	2	17	9	1	3	36	53
1908	26	26	14	37	6	1	16	13	2	4	64	81
1909 .....	..	14	11	38	5	..	31	10	3	2	50	64
1910	1	2	10	12	6	..	23	13	..	2	40	29
1911	1	7	13	23	7	3	17	11	..	1	38	45
1912 .....	..	1	8	11	11	4	26	7	..	..	45	23
1913 .....	..	7	9	23	5	1	20	8	..	..	34	39
Total	30	86	112	256	54	16	213	91	10	19	419	468
Average	3	9	11	26	5	2	21	9	1	2	42	47
1914	1	7	10	26	4	1	18	7	..	3	33	44

PART III.

REPORTS OF STREET RAILWAYS.

For The Year Ending June 30, 1914.



ATLANTIC SHORE RAILWAY.

HISTORY.

On December 1, 1910, the Atlantic Shore Line Railway was sold at foreclosure sale and reorganized December 31, 1910, under name of Atlantic Shore Railway.

PRINCIPAL OFFICERS.

President, Frederick O. Conant, Portland, Me.; Vice-President, Louis B. Goodall, Sanford, Me.; Treasurer, Constant Southworth, Portland, Me.; Assistant Treasurer, Stirling T. Dow; Auditor, J. W. Leavitt; General Manager, L. H. McCray, Kennebunk, Me.

DIRECTORS.

Fred J. Allen, Sanford, Me.; A. H. Bickmore, New York City; Wm. Binney, Jr., Newport, R. I.; Arthur S. Bosworth; Frederick O. Conant; Charles S. Cook; Ernest J. Eddy, Portland, Me.; George B. Goodall; Louis B. Goodall, Sanford, Me.; E. Burton Hart, New York City; George S. Hobbs, Portland, Me.; Julian S. Jones, Baltimore, Md.; C. H. Prescott, Biddeford, Me.; Constant Southworth; Theodore Gould; Geo. H. Weeks, Portland, Me.; J. E. Liggett, Augusta, Me.; R. H. Boutwell, Exeter, N. H.

FACTS PERTAINING TO CONTROL.

Date of last meeting of stockholders: January 21, 1914.

Date of last closing of stock books before end-of year for which this report is made: June 30, 1914.

Total number of stockholders of record: 140.

Each share of stock has one vote.

ROAD OPERATED.

Line owned:

Atlantic Shore Railway—

Springvale to Cape Porpoise.....	24.28 miles
Kennebunkport to Biddeford.....	10.00
South Berwick to South Berwick Junction.....	4.62
Dover and Eliot Bridge to Ferry Landing.....	9.72
Ferry Landing to Kennebunk.....	31.80
Rosemary to York Corner.....	7.20

87.62 miles

Line operated under lease for specified sum:

Dover and Eliot Street Railway from Dover to Dover and Eliot Bridge.....	2.78 miles
--	------------

Total mileage operated..... 90.40 miles

ROAD LEASED OR OTHERWISE ASSIGNED FOR OPERATION.

Dover and Eliot Street Railway from Dover to Dover and Eliot bridge:

Atlantic Shore Railway, lessee (single track).....	2.78 miles
--	------------

MILEAGE OF ROAD OPERATED.

	Miles owned.	Miles held under lease.	Total miles.
Maine, single track.....	87.62	....	87.62
New Hampshire, single track.....	....	2.78	2.78
Sidings and turnouts.....	4.64	.11	4.75
Total, all tracks.....	92.26	2.89	95.15

CAPITALIZATION.

Capital stock, authorized, and outstanding:	
Common, 10,000 shares, par value \$100 each; total.....	\$1,000,000.00
Dividends declared during the year, none.	
Funded debt, authorized and outstanding:	
Mortgage bonds, total par value not held by respondent	\$2,494,750.00
Mortgage bonds, total par value held in treasury	17,000.00
Mortgage bonds, total par value held in sinking or other funds	23,500.00
Total funded debt.....	\$2,535,250.00
Interest accrued during year.....	93,865.00
Total capitalization	3,535,250.00
Capital stock per mile of line, 87.62 miles.....	\$11,412.92
Funded debt, per mile of line, 87.62 miles.....	28,934.60
Total capitalization per mile of line.....	\$40,347.52

CURRENT ASSETS AND LIABILITIES.

Cash and current assets:	
Cash	\$5,490.24
Accounts receivable	27,565.71
Materials and supplies.....	16,897.16
Prepaid accounts	6,002.94
Total—cash and current assets.....	55,956.05
Balance—current liabilities	3,416.74
	\$59,372.79
Current liabilities:	
Loans and notes payable.....	\$34,453.61
Accounts payable	24,919.18
Total—current liabilities	\$59,372.79

COST OF ROAD AND EQUIPMENT.

	Cost to June 30, 1913.	Cost to June 30, 1914.
Road	\$3,297,803.72	\$3,297,803.72
Equipment	186,122.11	186,122.11
Total	\$3,483,925.83	\$3,483,925.83
Cost of road per mile of line, 87.62 miles.....		\$37,637.56
Cost of equipment per mile of line, 87.62 miles.....		2,124.20
Additions or deductions during year, none.		

INCOME ACCOUNT.

Operating revenues	\$362,771.70
Operating expenses	284,423.31
Net operating revenue.....	\$78,348.39
Interest on deposits.....	2,350.04
Gross income less operating expenses.....	\$80,698.43
Deductions from income:	
Taxes	\$7,933.25
Interest—	
On funded debt	93,865.00
On floating debt	217.55
Total deductions	\$102,015.80
Deficit for year.....	\$21,317.37
Deficit at beginning of year.....	58,717.75

Profit or loss adjustment during year:

Debits	\$55.00
Deficit at close of year.....	\$80,090.12

OPERATING REVENUES.

Account.	Total receipts.	Total deductions.	Total revenues.
Revenue from transportation:			
Passenger revenue	\$307,309.44	\$0.04	\$307,309.40
Baggage revenue	1,061.66	4.51	1,057.15
Parlor, chair and special car revenue	1,852.97	.....	1,852.97
Mail revenue	5,081.12	8.48	5,072.64
Express revenue	9,579.07	1.20	9,577.87
Freight revenue	28,195.76	.....	28,195.76
Miscellaneous transportation revenue	1,997.63	15.43	1,982.20
Total revenue from transportation	\$355,077.65	\$29.66	\$355,047.99
Revenue from operations other than transportation:			
Station and car privileges....	\$1,000.00	.....	\$1,000.00
Rents of buildings and other property	1,101.84	.....	1,101.84
Power	3,189.28	.....	3,189.28
Miscellaneous	2,432.59	.....	2,432.59
Total revenue from operations other than transportation	\$7,723.71	.....	\$7,723.71
Total operating revenues..	\$362,801.36	\$29.66	\$362,771.70

OPERATING EXPENSES.

Way and structures:	
Superintendence of way and structures.....	\$1,471.47
Maintenance of roadway and track.....	37,974.57
Other maintenance of way.....	6,509.46
Poles and fixtures.....	1,291.56
Transmission system	234.87
Distribution system	2,664.12
Miscellaneous electric line expenses.....	275.85
Buildings and structures.....	2,139.61
Depreciation of way and structures.....	12,000.00
Total—way and structures.....	\$64,561.51
Equipment:	
Superintendence of equipment.....	\$1,824.88
Power-plant equipment	2,249.91
Substation equipment	557.69
Maintenance of cars and locomotives.....	14,336.48
Maintenance of electric equipment of cars and locomotives	7,085.33
Miscellaneous equipment expenses.....	2,320.29
Depreciation of equipment.....	12,000.00
Total—equipment	\$40,374.58
Traffic:	
Traffic expenses	\$1,423.52
Conducting transportation:	
Superintendence of transportation.....	\$7,156.88
Group I—power—	
Power-plant employees	7,572.67
Substation employees	5,018.43
Fuel for power.....	15,142.71

Water for power.....	\$286.91
Lubricants for power.....	335.20
Miscellaneous power plant supplies and expenses.....	319.80
Substation supplies and expenses.....	117.74
Power purchased	25,098.33
Group II—Operation of cars—	
Passenger conductors, motormen and trainmen.....	46,121.27
Freight and express conductors, motormen and trainmen	5,802.62
Miscellaneous car-service employees and expenses.....	7,504.55
Station employees and expenses.....	4,951.58
Carhouse employees and expenses.....	7,940.07
Signal, interlocking, telephone and telegraph systems..	544.36
Express and freight collections and delivery.....	6,219.75
Loss and damage.....	32.52
Other transportation expenses.....	10,008.02
Total—conducting transportation	\$150,173.41
General and miscellaneous:	
Salaries and expenses of general officers and general office clerks	\$12,266.11
General office supplies and expenses.....	609.55
Law expenses	2.47
Miscellaneous general expenses.....	1,862.24
Injuries and damages.....	4,952.96
Insurance	5,904.04
Stationery and printing.....	1,240.64
Store expenses	883.72
Rent of equipment.....	173.50
Total—general and miscellaneous.....	\$27,890.29
Recapitulation of expenses:	
Way and structures.....	\$64,561.51
Equipment	40,374.58
Traffic	1,423.52
Conducting transportation	150,173.41
General and miscellaneous.....	27,890.29
Total operating expenses.....	\$284,423.31
Ratio of operating expenses to operating revenues, 78.40 per cent.	

COMPARATIVE GENERAL BALANCE SHEET.

June 30, 1913.	Assets.	June 30, 1914.
\$3,297,803.72	Cost of road.....	\$3,297,803.72
186,122.11	Cost of equipment.....	186,122.11
17,000.00	Funded debt owned.....	17,000.00
54,416.44	Cash and current assets.....	55,956.05
16,582.50	% Mousam River Railroad.....	17,597.08
4,424.11	% Alfred Light & Power Co.....	4,514.97
6,206.83	% Sanford & Cape Porpoise Ry.....	6,206.83
58,717.75	Deficit	80,090.12
\$3,641,273.46	Total	\$3,665,290.88
<i>Liabilities.</i>		
\$1,000,000.00	Capital stock, common.....	\$1,000,000.00
2,535,250.00	Funded debt	2,535,250.00
37,364.19	Current liabilities	59,372.79
Accrued liabilities:		
Not yet due—		
10,738.75	Interest on funded debt.....	10,738.75
33.31	Miscellaneous interest	104.95
20.32	Rents	121.33
225.00	Miscellaneous	
57,641.89	Reserves	59,703.06
\$3,641,273.46	Total	\$3,665,290.88

MILEAGE, TRAFFIC, AND MISCELLANEOUS STATISTICS.

Passenger car mileage.....	1,246,134
Freight, mail, and express car mileage.....	118,182
Total car mileage.....	1,364,316
Passenger car hours.....	94,234
Freight, mail, and express car hours.....	21,912
Total car hours.....	116,146
Regular fare passengers carried.....	3,886,551
Revenue transfer passengers carried.....	932,623
Total revenue passengers carried.....	4,819,174
Free transfer passengers carried.....	209,055
Total passengers carried.....	5,028,229
Passenger revenue	\$307,309.40
Average fare, revenue passengers .....	.06376
Average fare, all passengers (including transfer passengers) .....	.06111
Total revenue from transportation.....	\$355,047.99
Revenue from transportation per car mile.....	.26023
Revenue from transportation per car hour.....	3.05691
Total revenue from operations other than transportation	7,723.71
Revenue from operations other than transportation per car mile .....	.00566
Revenue from operations other than transportation per car hour .....	.06650
Total operating revenues.....	362,771.70
Operating revenues per car mile .....	.26590
Operating revenues per car hour	3.12341
Total operating expenses.....	284,423.31
Operating expenses per car mile .....	.20847
Operating expenses per car hour	2.44884

EMPLOYEES.

General administration:

General officers, 7. General office clerks, 9. Miscellaneous, 16.

Maintenance:

Superintendents, 4. Other employees, 125.

Transportation:

Superintendents, 3. Other employees, 141.

Total employees, 305. Aggregate salaries and wages, \$163,344.26.

EQUIPMENT.

	With electric equipment.	Without electric equipment.	Total.
Closed passenger cars.....	19	7	26
Open passenger cars.....	24	2	26
Total passenger cars.....	43	9	52
Freight cars .....	...	1	1
Mail cars	1	...	1
Express cars	3	...	3
Flat cars .....	...	5	5
Work cars	4	...	4
Snowplows .....	...	7	7
Single truck side dumps.....	...	5	5
Locomotives	2	...	2
Gondola coal cars.....	...	6	6
Ferry boats .....	...	1	1
Steamers .....	...	1	1
Total cars of all classes.....	53	35	88

ACCIDENTS TO PERSONS.

Passengers injured, 6; employees injured, 1; other persons killed, 2. Total injured, 7; killed, 2.

BAY STATE STREET RAILWAY.

HISTORY.

Chartered April 6, 1859, by special act of Massachusetts legislature as Lynn and Boston Railroad Company; name changed to Boston and Northern Street Railway Company, Acts of 1891; name again changed to Bay State Street Railway Company, Acts of 1911.

It is a consolidated company, having fifteen constituent parts, which were composed of sixty-two original companies. It is not a reorganized company. It operates its own lines.

PRINCIPAL OFFICERS.

Chairman of the Board, Gordon Abbott; President, Patrick F. Sullivan; Vice-President, Robert S. Goff; Vice-President, Horace B. Rogers; Vice-President, Charles R. Rockwell, Boston, Mass.; Clerk of Corporation, Charles Williams, Lynn, Mass.; Treasurer, Charles R. Rockwell; Attorney, or General Counsel, James F. Jackson; General Auditor, Herbert H. Read; General Manager, Robert S. Goff; Assistant General Manager, Henry E. Reynolds; General Freight and Express Agent, George Dunford; Passenger Agent, Ralph M. Sparks; Superintendent Motive Power and Machinery, Charles F. Bancroft; Electrical Engineer, George W. Palmer, Jr.; Engineer Maintenance of Way, David Curtin; General Claim Agent, William A. Rice, Boston, Mass.; General Superintendent, Div. 1, North, George H. Gray, Lynn, Mass.; General Superintendent, Div. 2, North, Thomas Lees, Lowell, Mass.; General Superintendent, Div. 1, South, John T. Conway, Brockton, Mass.; General Superintendent, Div. 2, South, George F. Seibel, Taunton, Mass.

DIRECTORS.

Gordon Abbot, Manchester, Mass.; Charles F. Adams, 2d, Lincoln, Mass.; John S. Bartlett, Lynn, Mass.; John H. Cunningham, Chelsea, Mass.; Charles E. Cotting, Boston, Mass.; Bradford D. Davol, Fall River, Mass.; Philip Dexter, Boston, Mass.; Robert S. Goff, Fall River, Mass.; Frederick S. Hall, Taunton, Mass.; Percy Parker, Lowell, Mass.; James A. Parker, Brookline, Mass.; Philip L. Saltonstall, Milton, Mass.; Galen L. Stone, Brookline, Mass.; Patrick F. Sullivan, Lowell, Mass.

FACTS PERTAINING TO CONTROL.

Last meeting of stockholders for election of directors, September 25, 1913. Total number of stockholders of record, June 30, 1914, 521. The Massachusetts electric companies hold control as trustee for the shareholders.

ROAD OPERATED.

Line owned:

Bay State Street Railway Company—

Lines in eastern Massachusetts..... 693.29 miles

Line operated under lease for specified sum:

Boston & Chelsea Railroad Co.,

From Chelsea, Mass., to Boston, Mass..... 2.18

Boston & Revere Electric St. Ry. Co.,

From Revere, Mass., to Boston, Mass..... 1.46

East Middlesex Street Ry. Co.,

From Woburn, Mass., to Revere and Saugus,
Mass. 16.03

Winnisimmet Railroad Co.,

Lines in Chelsea, Mass..... 1.04

Nashua Street Railway,

Mass.-N. H. state line to Nashua, N. H. (in-
cluding Nashua city lines)..... 14.61

Newport and Fall River St. Ry. Co., Mass.-R. I. state line to Newport, R. I. (in- cluding Newport city lines).....	18.92	54.24 miles
Line operated under trackage rights:		
Boston Elevated Railway Co., In Boston, Chelsea, Everett and Malden, Mass.	5.34	
Massachusetts Northeastern Street Railway Co., In Boston, Chelsea, Everett, and Malden.....	1.19	
General Electric Company, In Lynn, Mass.	1.14	
Newport & Providence St. Ry. Co., In Newport, R. I.....	.25	
Fore River Shipbuilding Co., In Quincy, Mass.....	1.06	8.98 miles
Total mileage operated.....		756.51 miles

MILEAGE OF ROAD OPERATED.

(All tracks.)

State.	Line owned.	Line under lease.	Line under trackage rights.	Total.
Massachusetts	693.29	20.71	7.92	721.92
New Hampshire		14.61	....	14.61
Rhode Island		18.92	1.06	19.98
Total	693.29	54.24	8.98	756.51
Second track	143.62	11.84	3.30	158.76
Sidings and turnouts.....	5.25	.39	....	5.64
Carhouse, yards, and gravel pits....	28.59	1.76	.07	30.42
Total mileage, all tracks.....	870.75	68.23	12.35	951.33

ROAD OPERATED—STATE OF NEW HAMPSHIRE.

Nashua Street Railway, miles of line 14.61, under lease July 1, 1900, to July 1, 1999, 6% annually on capital stock, interest on bonds, all taxes, and \$500 for maintenance of organization. The report of the Bay State Street Ry. Co. is on file in the office of the Public Service Commission.

INCOME ACCOUNT.

Operating revenues	\$9,428,113.15
Operating expenses	6,304,630.33
Net operating revenue.....	\$3,123,482.82
Miscellaneous income:	
Interest on deposits.....	\$28,372.45
Rents of leased lines.....	51,155.61
Other miscellaneous income.....	128,269.57
	207,797.63
Gross income less operating expenses.....	\$3,331,280.45
Deductions from income:	
Taxes—	
On real and personal property.....	\$149,423.98
On capital stock	270,299.78
On earnings	209,926.66
Miscellaneous	13,672.88
	\$643,323.30
Interest—	
On funded debt	1,027,088.81
On floating debt	81,535.67
	\$1,108,624.48

Rents of leased lines.....	\$206,136.48	
Other deductions from income.....	48,900.00	
Total deductions		\$2,006,984.26
Net income		\$1,324,296.19
Disposition of net income:		
Dividends on preferred stock	\$164,916.00	
Dividends on common stock	1,077,153.00	
		1,242,069.00
Surplus for year.....		\$82,227.19
Surplus at beginning of year.....		212,850.09
		\$295,077.28
Profit or loss adjustments during year:		
Credits	\$35,641.60	
Debits	117,186.76	
		81,545.16
Surplus at close of year.....		\$213,532.12

COMPARATIVE GENERAL BALANCE SHEET.

Assets.

June 30, 1913.		June 30, 1914.
\$34,573,676.06	Cost of road	\$35,267,420.55
9,278,587.12	Cost of equipment.....	9,762,128.05
462,272.93	General expenditures	467,768.70
	Expenditures for road and equipment	
84,480.06	and general expenditures—leased line	172,428.04
	Other permanent investments:	
28,000.00	Funded debt owned.....	
2,953,475.04	Cash and current assets.....	2,196,386.87
	Other assets:	
78,900.19	Sinking and special funds.....	97,619.02
1,133,699.40	Discount on bonds.....	1,251,010.53
170,177.92	Property suspense	223,671.80
1,131,277.28	Reconstruction suspense	1,308,936.28
14,250.67	Sundry accounts in suspense.....	6,732.86
10,002.76	Nashua St. Ry. lease account.....	10,002.76
\$49,918,799.43	Total	\$50,764,105.46

Liabilities.

\$2,748,600.00	Capital stock, preferred.....	\$2,748,600.00
20,517,200.00	Capital stock, common.....	20,517,200.00
23,106,000.00	Funded debt	23,477,000.00
2,148,954.42	Current liabilities	2,657,622.41
	Accrued liabilities:	
272,686.86	Taxes accrued and not yet due.....	271,614.93
	Interest on funded debt accrued and	
101,614.58	not yet due.....	97,625.06
	Miscellaneous interest accrued and	
	not yet due	5,637.50
24,110.96	Rents accrued and not yet due.....	23,591.98
	Miscellaneous:	
580.83	Water rates	576.15
3,692.87	Sundry rents	2,861.80
	Boston & Maine Electric Street	
1,200.00	Railway Co.—lease account....	1,200.00
357,480.00	Premium on preferred stock.....	357,480.00
423,828.82	Reserves	389,563.51
212,850.09	Surplus	213,532.12
\$49,918,799.43	Total	\$50,764,105.46

BERLIN STREET RAILWAY.

HISTORY.

Organized April 22, 1898, under chapter 156, Public Statutes of State of New Hampshire.

PRINCIPAL OFFICERS.

President, Frank L. Castner, Boston, Mass.; Secretary, H. G. Noyes, Gorham, N. H.; Treasurer and General Manager, E. W. Gross, Berlin, N. H.

DIRECTORS.

Frank L. Castner, Boston, Mass.; E. W. Gross, Berlin, N. H.; H. G. Noyes; J. F. Libby, Gorham, N. H.; H. E. Hitchcock, A. L. Winslow, E. O. McAlister, Auburn, Maine.

FACTS PERTAINING TO CONTROL.

Last meeting of stockholders for election of directors, July 9, 1913.
Last closing of stock books, June 30, 1914.

Total number of stockholders of record, 35. Each share of stock has one vote. No issue of securities has contingent voting rights or special privileges in its election of directors. Corporation not under outside control.

ROAD OPERATED.

Line owned and operated:	
Main track, Berlin to Gorham.....	7.50 miles
Sidings and switches.....	.25
Total mileage operated (all tracks).....	7.75 miles

CAPITALIZATION.

Capital stock, authorized, issued, and outstanding, not held by respondent corporation:	
Common, 800 shares, par value, \$100 each; total \$80,000.00.	
Preferred, 300 shares, par value, \$100 each, total \$30,000.00.	
Dividends declared, none.	
Funded debt, authorized, issued, outstanding, not held by respondent corporation:	
Mortgage bonds on line owned, term Feb. 1, 1902, to Feb. 1, 1922, total par value.....	\$105,000.00
Interest accrued and paid during the year, 5%.....	5,276.65
Capital stock per mile of line, 7.5 miles.....	14,666.67
Funded debt per mile of line, 7.5 miles.....	14,000.00
Total capitalization per mile of line.....	\$28,666.67

INCOME ACCOUNT.

Operating revenues	\$46,134.25
Operating expenses	40,449.54
Gross income less operating expenses.....	\$5,684.71
Deductions from income:	
Interest on funded debt.....	\$5,250.00
Interest on floating debt.....	26.65
Total deductions	5,276.65
Surplus for year.....	\$408.06
Surplus at beginning of year.....	6,338.26
Surplus at close of year.....	\$6,746.32

OPERATING REVENUES.

Revenue from transportation:	
Passenger revenue	\$45,934.55
Revenue from operations other than transportation:	
Miscellaneous—Park	199.70
Total operating revenues.....	\$46,134.25

OPERATING EXPENSES.

Way and structures:	
Superintendence of way and structures.....	\$3,520.00
Maintenance of way	3,096.55
Maintenance of electric lines	2,093.58
Total—way and structures.....	\$8,710.13
Equipment:	
Maintenance of power equipment	\$4,605.44
Maintenance of cars and locomotives.....	1,487.32
Maintenance of electric equipment of cars and locomotives.	2,221.37
Taxes	1,973.35
Total—equipment	\$10,287.48
Conducting transportation:	
Group I—power—	
Substation employees	\$2,133.03
Fuel for power.....	3,320.65
Power purchased	4,622.55
Group II—operation of cars—	
Conductors, motormen, and trainmen.....	8,546.64
Miscellaneous transportation expenses.....	1,228.81
Total—conducting transportation	\$19,851.68
General and miscellaneous:	
Insurance	\$599.13
Injuries and damages, legal.....	1,001.12
Total—general and miscellaneous.....	\$1,600.25
Recapitulation of expenses:	
Way and structures.....	\$8,710.13
Equipment	10,287.48
Conducting transportation	19,851.68
General and miscellaneous.....	1,600.25
Total operating expenses.....	\$40,449.54

Ratio of operating expenses to operating revenues, 87.72%.

COMPARATIVE GENERAL BALANCE SHEET.

Assets.

June 30, 1913.		June 30, 1914.
\$192,100.00	Cost of road	\$192,100.00
22,900.00	Cost of equipment	22,900.00
6,338.26	Cash and current assets.....	6,746.32
\$221,338.26	Total	\$221,746.32

Liabilities.

\$30,000.00	Capital stock, preferred	\$30,000.00
80,000.00	Capital stock, common.....	80,000.00
105,000.00	Funded debt	105,000.00
6,338.26	Surplus	6,746.32
\$221,338.26	Total	\$221,746.32

MILEAGE, TRAFFIC, AND MISCELLANEOUS STATISTICS.

Passenger car mileage	153,975
Passenger car hours	15,131
Regular fare passengers carried.....	918,691
Passenger revenue	\$45,934.55
Average fare, revenue passengers.....	.05
Average fare, all passengers.....	.05
Total revenue from transportation.....	45,934.55
Revenue from transportation per car mile .....	.29832
Revenue from transportation per car hour	3.03578
Total revenue from operations other than transportation..	199.70
Revenue from operations other than transportation per car mile	1.29069
Revenue from operations other than transportation per car hour	1.31980
Total operating revenues.....	46,134.25
Operating revenues per car mile .....	.29962
Operating revenues per car hour	3.48985
Total operating expenses.....	40,449.54
Operating expenses per car mile .....	.26277
Operating expenses per car hour	2.67328

EMPLOYEES.

General officer, 1; office clerk, 1; others, 16; total, 18.	
Aggregate salaries and wages paid.....	\$17,794.84

EQUIPMENT.

Passenger cars:	
Closed, 4; open, 4; total, 8. 1 snowplow.	

ACCIDENTS TO PERSONS.

None.

CHESTER & DERRY RAILROAD ASSOCIATION.

HISTORY.

Organized June 6, 1891, under laws of State of New Hampshire.

PRINCIPAL OFFICERS.

President, Greenleaf K. Bartlett, Boston, Mass.; Secretary, Arthur H. Wilcomb, Chester, N. H.; Treasurer, F. J. Shepard, Derry, N. H.; General Counsel, G. K. Bartlett, Boston, Mass.; Auditor, Arthur H. Wilcomb, Chester, N. H.; General Manager, F. J. Shepard; General Superintendent, F. J. Shepard, Jr., Derry, N. H.

DIRECTORS.

Greenleaf K. Bartlett, Boston, Mass.; Frederick J. Shepard; Charles Bartlett, Derry, N. H.; Arthur H. Wilcomb; Nathan W. Goldsmith; George S. West, Chester, N. H.; F. J. Shepard, Jr., Derry, N. H.

FACTS PERTAINING TO CONTROL.

Last meeting of stockholders for election of directors, and last closing of stock books, August 13, 1913.

Total number of stockholders of record, 123. Each share has one vote.

No issue of securities has contingent voting rights, or special privileges in election of directors.

Corporation not under outside control.

ROAD OPERATED.

Line owned and operated:	
Main line, Chester to Derry (single track).....	7.75 miles
Sidings and turnouts.....	.33
Total mileage operated (all tracks).....	8.08 miles

CAPITALIZATION.

Capital stock authorized, issued, outstanding, not held by respondent corporation:	
Common, 500 shares, par value \$100, total.....	\$50,000.00
No dividends declared during year.	
Funded debt authorized and outstanding:	
Mortgage bonds on line owned, 1896 to 1926, total par value	\$50,000.00
Held in sinking or other funds, total par value.....	1,500.00
Interest paid during the year, 5%.....	2,500.00
Capital stock per mile of line, 7.75 miles.....	\$6,451.61
Funded debt per mile of line.....	6,451.61
Total per mile of line	<u>\$12,903.22</u>

EXPENDITURES FOR ROAD AND EQUIPMENT, ETC.

Account.	Total cost to June 30, 1913.	Deductions during year.	Total cost to June 30, 1914.
Road:			
Right of way	\$3,750.00	.....	\$3,750.00
Grading	34,038.64	.....	34,038.64
Ballast	1,000.00	.....	1,000.00
Ties	4,000.00	.....	4,000.00
Rails, rail fastenings, and joints	21,604.00	.....	21,604.00
Special work	500.00	.....	500.00
Track laying and surfacing...	3,000.00	.....	3,000.00
Bridges, trestles and culverts..	400.00	.....	400.00
Telegraph and telephone lines.	200.00	.....	200.00
Poles and fixtures.....	2,000.00	.....	2,000.00
Transmission system	15,809.34	.....	15,809.34
Shops and carhouses.....	4,648.71	.....	4,648.71
Stations, waiting rooms, and miscellaneous buildings	63.81	.....	63.81
Power-plant equipment.....	1,500.00	.....	1,500.00
Park and resort property.....	3,013.78	.....	3,013.78
Total	<u>\$95,528.28</u>	<u>.....</u>	<u>\$95,528.28</u>
Equipment:			
Cars	\$4,075.23	\$75.23	\$4,000.00
Electric equipment of cars....	4,431.59	431.59	4,000.00
Miscellaneous equipment	1,000.00	.....	1,000.00
Total	<u>\$9,506.82</u>	<u>\$506.82</u>	<u>\$9,000.00</u>
Recapitulation:			
Road	\$95,528.28	.....	\$95,528.28
Equipment	9,506.82	\$506.82	9,000.00
Total	<u>\$105,035.10</u>	<u>\$506.82</u>	<u>\$104,528.28</u>
Cost of road per mile of line....	\$12,326.23	.....	\$12,326.23
Cost of equipment per mile of line	1,226.68	.....	1,161.29
Total per mile of line.....	<u>\$13,552.91</u>	<u>.....</u>	<u>\$13,487.52</u>

INCOME ACCOUNT.

Operating revenues	\$18,413.40
Operating expenses	13,266.19
Gross income less operating expenses.....	<u>\$5,147.21</u>
Deductions from income:	
Taxes	\$800.00

Interest—	
On funded debt	\$2,500.00
On floating debt.....	358.70
Total deductions	<u>\$3,658.70</u>
Surplus for year	\$1,488.51
Surplus at beginning of year.....	<u>7,771.27</u>
Total surplus	\$9,259.78
Adjustments during year (Debit).....	<u>506.82</u>
Surplus at close of year.....	\$8,752.96

OPERATING REVENUES.

Revenue from transportation:	
Passenger revenue	\$15,966.25
Mail revenue	531.24
Milk revenue	270.24
Freight revenue	<u>1,548.67</u>
Total revenue from transportation.....	\$18,316.40
Revenue from operations other than transportation:	
Miscellaneous	<u>97.00</u>
Total operating revenues	\$18,413.40

OPERATING EXPENSES.

Way and structures:	
Maintenance of way	\$2,310.31
Maintenance of electric lines.....	<u>38.27</u>
Total—way and structures.....	\$2,348.58
Equipment:	
Maintenance of cars and locomotives.....	\$762.30
Maintenance of electric equipment of cars and locomotives.....	478.53
Depreciation of equipment.....	<u>192.41</u>
Total—equipment	\$1,433.24
Conducting transportation:	
Superintendence of transportation.....	\$650.00
Group I—power—	
Power purchased	3,108.00
Group II—operation of cars—	
Conductors, motormen, and trainmen.....	4,569.94
Miscellaneous transportation expenses.....	<u>21.40</u>
Total—conducting transportation	\$8,349.34
General and miscellaneous:	
General expenses	\$445.81
Insurance	609.22
Rent of tracks and terminals	<u>80.00</u>
Total—general and miscellaneous	\$1,135.03
Recapitulation of expenses:	
Way and structures	\$2,348.58
Equipment	1,433.24
Conducting transportation	8,349.34
General and miscellaneous	<u>1,135.03</u>
Total operating expenses.....	\$13,266.19

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COMPARATIVE GENERAL BALANCE SHEET.

June 30, 1913.		<i>Assets.</i>	June 30, 1914.
\$95,528.28	Cost of road		\$95,528.28
9,506.82	Cost of equipment.....		9,000.00
8,123.00	Cash and current assets.....		9,611.51
1,500.00	Sinking and other special funds.....		1,500.00
<hr/>			<hr/>
\$114,658.10	Total		\$115,639.79
<i>Liabilities.</i>			
\$50,000.00	Capital stock, common.....		\$50,000.00
50,000.00	Funded debt		50,000.00
6,678.50	Current liabilities		6,678.50
	Accrued liabilities:		
	Interest on funded debt accrued and not yet due		208.33
208.33	Surplus		8,752.96
7,771.27			
<hr/>			<hr/>
\$114,658.10	Total		\$115,639.79

MILEAGE, TRAFFIC, AND MISCELLANEOUS STATISTICS.

Passenger car mileage	59,975
Freight, mail and express car mileage.....	7,375
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Total car mileage.....	67,350
Freight, mail, and express car hours.....	990
Passenger car hours	8,340
<hr/>	<hr/>
Total car hours	9,330
Regular fare passengers carried.....	399,875
Passenger revenue	\$15,966.25
Average fare, revenue passengers.....	.039902
Total revenue from transportation.....	18,316.40
Revenue from transportation per car mile.....	.27195
Revenue from transportation per car hour.....	1.96317
Total revenue from operations other than transportation	97.00
Revenue from operations other than transportation per car mile .....	.00144
Total operating revenues.....	18,413.40
Operating revenues per car mile.....	.27339
Operating revenues per car hour.....	1.9735
Total operating expenses.....	13,266.19
Operating expenses per car mile.....	.19697
Operating expenses per car hour.....	1.4218

EMPLOYEES.

General mechanic	1
Motormen	2
Conductors	2
Laborers on track in summer.....	3

EQUIPMENT.

Passenger cars: closed, 4 with and 1 without electric equipment.	
Passenger cars: open, 4 with and 1 without electric equipment.	
Total passenger cars	10
Freight cars: 2 with electric equipment; 1 snowplow with electric equipment.	
Total cars of all classes.....	13

ACCIDENTS TO PERSONS.

None.

CLAREMONT RAILWAY & LIGHTING COMPANY.

HISTORY.

Organized March 22, 1901, by consolidation of Claremont Electric Light Company (August 17, 1887), with Claremont Street Railway Company (February 14, 1899), under laws of State of New Hampshire.

PRINCIPAL OFFICERS.

President, Joseph B. Taylor; Vice-President, Lucien H. Tyng; Secretary and Treasurer, J. R. Fusselman, New York, N. Y.; Clerk, R. W. Berliner, Claremont, N. H.; Attorney, J. E. Allen, Keene, N. H.; Assistant Treasurer, L. A. McVeigh; General Manager, R. W. Berliner; General Superintendent, H. E. Aldrich, Claremont, N. H.

DIRECTORS.

Joseph B. Taylor, Lucien H. Tyng, W. S. Barstow, O. C. Swenson, New York City; H. R. Beckwith, Claremont, N. H.

FACTS PERTAINING TO CONTROL.

Last meeting of stockholders for election of directors, July 31, 1913. Total number of stockholders of record, 83. Each share of stock has one vote. No issue of securities has contingent voting rights or special privileges in election of directors. Respondent is controlled by Eastern Power and Light Corporation by purchase of majority of common stock.

ROAD OPERATED.

Line owned and operated:	
Main line, Claremont Junction to West Claremont.....	5.33 miles
Second track	2.42
Sidings and turnouts.....	.66
Total mileage operated (all tracks).....	8.41 miles

CAPITALIZATION.

Capitalization authorized, outstanding, not held by respondent:	
Common, 1,600 shares, par value \$100 each, total.....	\$160,000.00
Dividends declared during year, none.	
Funded debt authorized, outstanding, not held by respondent:	
Mortgage bonds on property owned 1907 to 1937, total par value	\$150,000.00
Interest paid during year, 5%, total.....	7,500.00
Capital stock per mile of line.....	19,024.97
Funded debt per mile of line.....	17,835.91
Total capitalization per mile of line.....	\$36,860.88

EXPENDITURES FOR ROAD, EQUIPMENT, ETC.

Account.	Total cost to June 30, 1913.	Additions during year.	Deductions during year.	Total cost to June 30, 1914.
Road:				
Roadbed and tracks.....	\$184,412.69	\$3,505.88	.....	\$187,918.57
Land and buildings.....	24,307.12	57.47	.....	24,364.59
Distribution system	36,294.46	513.38	.....	36,807.84
Total	\$245,014.27	\$4,076.73	.....	\$249,091.00

Equipment:

Cars	\$43,691.85	\$144.62	.....	\$43,836.47
Electric equipment of cars	24,864.96	.....	\$150.00	24,714.96
Miscellaneous equipment..	6,745.31	.....	.....	6,745.31
Total	\$75,302.12	\$144.62	\$150.00	\$75,296.74
Total road and equipment	\$320,316.39	\$4,221.35	\$150.00	\$324,387.74
Cost of road per mile of line	\$29,133.68	.....	.....	\$29,618.43
Cost of equipment per mile of line	8,953.88	.....	.....	8,953.24
Total cost per mile of line	\$38,087.56			\$38,571.67

INCOME ACCOUNT.

Operating revenues	\$42,424.89
Operating expenses	31,910.16
Net operating revenue.....	\$10,514.73
Miscellaneous income:	
Interest on deposits.....	12.50
Gross income less operating expenses.....	\$10,527.23
Deductions from income:	
Taxes on real and personal property.....	\$169.55
Interest on funded debt.....	7,500.00
Other deductions from income.....	228.13
Total deductions	\$7,897.68
Net income	\$2,629.55
Deficit at beginning of year.....	5,180.75
Total deficit	\$2,551.20
Profit or loss adjustments during year:	
Debits:	
Adjustment of accounts receivable.....	100.00
Deficit at close of year.....	\$2,651.20

OPERATING REVENUES.

Revenue from transportation:	
Passenger revenue	\$19,743.85
Baggage revenue	164.70
Parlor, chair and special car revenue.....	24.00
Mail revenue	452.51
Milk revenue	8.27
Freight revenue	21,906.64
Total revenue from transportation.....	\$42,299.97
Revenue from other sources:	
Station and car privileges.....	124.92
Total operating revenues.....	\$42,424.89

OPERATING EXPENSES.

Way and structures:	
Superintendence of way and structures.....	\$286.42
Maintenance of way.....	4,379.72
Maintenance of electric lines.....	649.28
Buildings and structures.....	283.55
Total—way and structures.....	\$5,598.97

Equipment:	
Superintendence of equipment.....	\$183.42
Maintenance of cars and locomotives	3,359.24
Maintenance of electric equipment of cars and locomotives	1,968.34
Miscellaneous	51.06
Total—equipment	\$5,562.06
Traffic expenses	\$323.54
Conducting transportation:	
Superintendence of transportation.....	\$726.21
Group I—power—	
Power purchased	5,421.80
Group II—operation of cars—	
Conductors, motormen, and trainmen.....	7,770.64
Miscellaneous transportation expenses.....	2,168.52
Total—conducting transportation	\$16,087.17
General and miscellaneous:	
General expenses	3,372.52
Injuries and damages.....	8.29
Insurance	700.26
Stationery and printing.....	244.46
Store and stable expenses.....	12.89
Total—general and miscellaneous.....	\$4,338.42
Recapitulation of expenses:	
Way and structures.....	\$5,598.97
Equipment	5,562.06
Traffic	323.54
Conducting transportation	16,087.17
General and miscellaneous.....	4,338.42
Total operating expenses.....	\$31,910.16

Ratio of operating expenses to operating revenue, 75.21%.

COMPARATIVE GENERAL BALANCE SHEET.

Assets.		
June 30, 1913.		June 30, 1914.
\$245,014.27	Cost of road	\$249,091.00
75,302.12	Cost of equipment	75,296.74
9,532.19	Cash and current assets.....	7,126.77
	Other assets:	
.....	Deferred operating expenses.....	4,007.13
.....	Suspense—auditing—	270.75
5,180.75	Deficit	2,651.20
\$335,029.33	Total	\$338,443.59
Liabilities.		
\$160,000.00	Capital stock, common.....	\$160,000.00
150,000.00	Funded debt	150,000.00
6,264.33	Current liabilities	28,302.63
	Accrued liabilities:	
15.00	Taxes	80.96
18,750.00	Interest on funded debt accrued.....	.....
.....	Reserves for liability insurance.....	60.00
\$335,029.33	Total	\$338,443.59

MILEAGE, TRAFFIC, AND MISCELLANEOUS STATISTICS.

Passenger car mileage.....	98,495
Freight car mileage.....	9,720
Total car mileage.....	108,215

Passenger car hours.....	11,493
Freight car hours.....	2,754
Total car hours.....	14,247
Regular fare passengers carried.....	361,534
Free passengers carried.....	22,594
Total passengers carried.....	384,128
Passenger revenue	\$19,743.66
Average fare, revenue passengers.....	.051845
Average fare, all passengers.....	.051398
Total revenue from transportation.....	42,299.97
Revenue from transportation per car mile .....	.200452
Revenue from transportation per car hour	1.718
Total revenue from operations other than transportation	124.92
Revenue from operations other than transportation per	
car mile .....	.01268
Revenue from operations other than transportation per	
car hour .....	.10869
Total operating revenues.....	42,424.89
Operating revenues per car mile .....	.39204
Operating revenues per car hour	2.97793
Total operating expenses	31,910.16
Total operating expenses per car mile .....	.29480
Total operating expenses per car hour	2.23977

EMPLOYEES.

General administration:	
General officers, 6; general office clerks, 5; total.....	11
Transportation:	
Superintendent, 1; other employees, 30; total.....	31
Total all divisions.....	42
Aggregate salaries and wages paid, \$21,682.30.	

DESCRIPTION OF EQUIPMENT—ELECTRIC.

Passenger cars closed, 3; open, 3; total.....	6
Work car, 1; snowplow, 1; locomotives, 2; total.....	4
Total cars all classes.....	10

ACCIDENTS TO PERSONS.

Employees (injured)	7
Other persons (injured).....	1
Total	8

BOSTON & MAINE RAILROAD.

(Operating the CONCORD & MANCHESTER ELECTRIC BRANCH of the Concord & Montreal Railroad.)

For history, principal officers, directors and facts pertaining to control, see Part I—Reports of Steam Railroads, Boston & Maine Railroad.

MILEAGE OF ROAD OPERATED.

Line operated under lease: term, April 1, 1895, to April 1, 1986. Interest on debt, and 7% on capital stock.	
Main line, Concord to Manchester and Penacook.....	28.70 miles
Sidings and turnouts.....	2.02
Total mileage operated (all tracks).....	30.72 miles

CAPITALIZATION.

Capital stock:	
2,655 shares, Concord & Montreal Railroad, common, total par value	\$265,500.00
Premium on Concord & Montreal Railroad stock sold.....	223,232.28
Funded debt:	
Plain bonds, 3½%, Concord & Montreal Railroad, maturing June 1, 1920, total.....	473,000.00

EXPENDITURES FOR ROAD AND EQUIPMENT, ETC.

Account.	Total cost to June 30, 1913.	Deductions during year.	Total cost to June 30, 1914.
Road:			
Miscellaneous	\$239,821.28	\$1,400.00	\$238,421.28
Park and resort property...	16,734.92	.....	16,734.92
Cost of road purchased....	383,188.37	.....	383,188.37
Total	\$639,744.57	\$1,400.00	\$638,344.57
Equipment	\$326,051.75	.....	\$326,051.75
Recapitulation:			
Road	\$639,744.57	\$1,400.00	\$638,344.57
Equipment	326,051.75	.....	326,051.75
Total	\$965,796.32	\$1,400.00	\$964,396.32
Cost of road per mile of line..	\$22,290.75	.....	\$22,241.96
Cost of equipment per mile of line	11,360.69	.....	11,360.69
Total per mile of line....	\$33,651.44	.....	\$33,602.65
Total miles	28.70	.....	28.70

INCOME ACCOUNT.

Operating revenues	\$190,155.80
Operating expenses	107,345.23
Gross income less operating expenses.....	\$82,810.57
Taxes (included in the total assessment against the Concord & Montreal Railroad).....	.....
Surplus for year	\$82,810.57

OPERATING REVENUES.

Revenue from transportation:	
Passenger revenue	\$188,618.36
Revenue from operations other than transportation:	
Station and car privileges.....	\$1,156.04
Car service	381.40
Total revenue from operations other than transportation.	\$1,537.44
Total operating revenues.....	\$190,155.80

OPERATING EXPENSES.

Way and structures:	
Superintendence of way and structures.....	\$989.69
Maintenance of way	19,962.61
Maintenance of electric lines.....	2,761.60
Buildings and structures.....	319.19
Total—way and structures.....	\$24,033.09

Equipment:	
Superintendence of equipment.....	\$120.00
Maintenance of power equipment.....	179.12
Maintenance of cars and locomotives.....	8,443.81
Maintenance of electric equipment of cars and locomotives.....	6,693.93
Miscellaneous	147.49
Total—equipment	\$15,584.35
Traffic expenses	\$2,065.91
Conducting transportation:	
Superintendence of transportation.....	\$3,791.99
Group I—power—	
Power-plant employees	1,669.13
Substation employees	1,978.93
Other power supplies and expenses.....	31.13
Power purchased	118.71
Power exchanged	9,404.70
Group II—operation of cars—	
Conductors, motormen and trainmen.....	36,600.57
Miscellaneous transportation expenses	5,915.60
Total—conducting transportation	\$59,510.76
General and miscellaneous:	
General expenses	\$613.59
Injuries and damages.....	4,465.61
Insurance	759.93
Stationery and printing.....	311.99
Total—general and miscellaneous.....	\$6,151.12
Recapitulation of expenses:	
Way and structures.....	\$24,033.09
Equipment	15,584.35
Traffic	2,065.91
Conducting transportation	59,510.76
General and miscellaneous	6,151.12
Total operating expenses	\$107,345.23
Ratio of operating expenses to operating revenues, 56.45%.	

RENTS OF LEASED LINES.

Boston & Maine Railroad, lessor.

Rental paid by Boston & Maine Railroad for lease of the Concord & Montreal Railroad includes the Concord & Manchester Electric Branch of the latter company.

COMPARATIVE GENERAL BALANCE SHEET.

<i>Assets.</i>		
June 30, 1913.		June 30, 1914.
\$639,744.57	Cost of road	\$638,344.57
326,051.75	Cost of equipment.....	326,051.75
\$965,796.32	Total	\$964,396.32
<i>Liabilities.</i>		
\$265,500.00	Capital stock, common.....	\$265,500.00
223,232.28	Premium on C. & M. R. R. stock sold.....	223,232.28
473,000.00	Funded debt	473,000.00
4,064.04	Current liabilities	2,664.04
\$965,796.32	Total	\$964,396.32

MILEAGE, TRAFFIC, AND MISCELLANEOUS STATISTICS.

Passenger car mileage	761,360
Passenger car hours.....	70,504
Regular fare passengers carried.....	3,770,524
Free transfer passengers carried.....	525,141
Total passengers carried.....	4,295,665
Passenger revenue	\$188,618.36
Average fare, revenue passengers.....	.05002
Average fare, all passengers (including transfer passengers) .....	.04390
Total revenue from transportation.....	188,618.36
Revenue from transportation per car mile.....	.24773
Revenue from transportation per car hour.....	2.67528
Total revenue from operations other than transportation	1,537.44
Revenue from operations other than transportation per car mile .....	.00201
Revenue from operations other than transportation per car hour .....	.02180
Total operating revenues	190,155.80
Operating revenues per car mile.....	.24975
Operating revenues per car hour.....	2.69709
Total operating expenses.....	107,345.23
Operating expenses per car mile.....	.14099
Operating expenses per car hour.....	1.52254

EMPLOYEES.

General office clerks	2
Maintenance:	
Superintendent and 30 others	31
Transportation:	
Employees	61
Total	94

EQUIPMENT.

Passenger cars:	
With electric equipment, closed, 23; open, 8; without electric equipment, 6; total passenger cars	37
Work cars:	
With electric equipment, 2; without, 1; total.....	3
Snowplows:	
With electric equipment.....	3
Total cars of all classes.....	43

ACCIDENTS TO PERSONS.

Passengers, none; employees, none.
Other persons, killed, 1; total killed, 1.

DOVER, SOMERSWORTH & ROCHESTER STREET RAILWAY COMPANY.

HISTORY.

Organized July 1, 1901, under General Laws of State of New Hampshire.

PRINCIPAL OFFICERS.

President and Chairman of the Board, David A. Belden; Vice-President, Franklin Woodman; Treasurer, Frederick E. Webster, Haverhill, Mass.; Clerk, Frank A. Belden, Portsmouth, N. H.

DIRECTORS.

David A. Belden, Haverhill, Mass.; Alfred D. Foster, Boston, Mass.; Charles F. Ayer, Lowell, Mass.; Franklin Woodman, Haverhill, Mass.; J. S. Whitaker, Portsmouth, N. H.

FACTS PERTAINING TO CONTROL.

Last meeting of stockholders for election of directors, and last closing of books, August 27, 1912. Total number of stockholders of record, 5. Each share of stock has one vote. No issue of securities has contingent voting rights or special privileges in election of directors. New York Trust Company, New York, N. Y., as trustee, controls the respondent. The trust is maintained for the New Hampshire Electric Railways, a trust of similar nature to Massachusetts Electric Trust. Title is vested in trustee. Property is represented by shares having incidents of corporate shares.

ROAD OPERATED.

Line owned:

In Dover—

Loop at Washington Street and Central avenue.....	1.37 miles
From Sawyer's Mills to Y at Somersworth city line.....	3.45
On Rochester Route: From Y to Somersworth city line above Granite State Park	1.12

In Somersworth—

From Granite State Park to Rochester city line.....	1.94
From Somersworth to Y at Central Park.....	3.10

In Rochester—

From Somersworth city line to Strafford Square.....	6.15
From Central Square to East Rochester.....	2.87

Total mileage operated (all tracks).....	20.00 miles
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CAPITALIZATION.

Capital stock, authorized and outstanding, not held by respondent, common, 3,750 shares, par value \$100 each; total....	\$375,000.00
Dividends declared during year, none.	

Funded debt, authorized and outstanding:

Mortgage bonds, on entire line, not held, par value.....	\$238,000.00
Mortgage bonds, on entire line, held in sinking funds.....	62,000.00

Total	\$300,000.00
Interest paid during year, 5%, payable January 1 and July 1	15,000.00

Capital stock per mile of line.....	18,750.00
Funded debt per mile of line.....	15,000.00

Total capitalization per mile of line.....	\$33,750.00
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EXPENDITURES FOR ROAD AND EQUIPMENT, ETC.

	Total cost to June 30, 1913.	Additions during year.	Total cost to June 30, 1914.
Road:			
Engineering and superintendence	\$10,578.40	.....	\$10,578.40
Right of way.....	2,000.00	.....	2,000.00
Other land used in electric rail- way operations	14,000.00	.....	14,000.00
Grading	41,551.93	.....	41,551.93
Ballast	13,810.34	.....	13,810.34
Ties	41,600.00	.....	41,600.00
Rails, rail fastenings, and joints.	80,000.00	.....	80,000.00
Special work	6,000.00	.....	6,000.00
Paving	79,039.70	\$1,516.40	80,556.10
Track laying and surfacing.....	38,716.98	.....	38,716.98
Roadway tools	2,100.00	.....	2,100.00

	Total cost to June 30, 1913.	Additions during year.	Total cost to June 30, 1914.
Bridges, trestles, and culverts..	\$12,000.00	.....	\$12,000.00
Crossings, fences, cattle guards, and signs	3,000.00	.....	3,000.00
Interlocking and other signal ap- paratus	3,373.79	.....	3,373.79
Telegraph and telephone lines....	1,805.60	.....	1,805.60
Poles and fixtures.....	12,820.17	.....	12,820.17
Distribution system	53,739.51	.....	53,739.51
Substation buildings.....	15,000.00	.....	15,000.00
Shops and carhouses.....	31,773.88	.....	31,773.88
Stations, waiting rooms, and mis- cellaneous buildings	1,337.80	.....	1,337.80
Substation equipment	34,032.77	.....	34,032.77
Shop equipment	4,205.92	.....	4,205.92
Park and resort property.....	37,099.04	.....	37,099.04
Total	<u>\$539,585.83</u>	<u>\$1,516.40</u>	<u>\$541,102.23</u>
Equipment:			
Cars	\$54,962.78	.....	\$54,962.78
Electric equipment of cars.....	53,979.68	.....	53,979.68
Other rail equipment.....	5,000.00	.....	5,000.00
Total	<u>\$113,942.46</u>	<u>.....</u>	<u>\$113,942.46</u>
General expenditures:			
Interest	<u>\$40,000.00</u>	<u>.....</u>	<u>\$40,000.00</u>
Recapitulation:			
Road	\$539,585.83	\$1,516.40	\$541,102.23
Equipment	113,942.46	.....	113,942.46
General expenditures	40,000.00	.....	40,000.00
Total	<u>\$693,528.29</u>	<u>\$1,516.40</u>	<u>\$695,044.69</u>
Cost of road per mile of line.....	\$26,979.29	\$75.82	\$27,055.11
Cost of equipment per mile of line..	5,697.13	.....	5,697.13
General expenditures per mile of line	2,000.00	.....	2,000.00
Total per mile of line.....	<u>\$34,676.42</u>	<u>\$75.82</u>	<u>\$34,752.24</u>

INCOME ACCOUNT.

Operating income:		
Operating revenues		\$109,320.85
Operating expenses		84,002.44
Net operating revenue		<u>\$25,318.41</u>
Miscellaneous income:		
Interest on deposits	\$3,133.42	
Other miscellaneous income.....	18.35	
		<u>3,151.77</u>
Gross income less operating expenses.....		<u>\$28,470.18</u>
Deductions from income:		
Taxes—		
On real and personal property.....	\$406.86	
On capital stock, state tax.....	3,771.20	
Miscellaneous, previous year.....	8.50	
	<u>\$4,186.56</u>	
Interest on funded debt.....	15,000.00	
Total deductions		<u>19,186.56</u>
Net income		<u>\$9,283.62</u>

Disposition of net income:

Reserves and special charges—		
Payments to sinking funds.....	\$8,087.17	
Depreciation	16,000.00	
		<hr/>
		\$24,087.17
Deficit for year.....		<hr/>
		\$14,803.55
Deficit at beginning of year.....		<hr/>
		52,377.90
		<hr/>
		\$67,181.45
Profit or loss adjustments during year:		
Credits—		
Rebate taxes		<hr/>
		3,060.00
Deficit at close of year.....		<hr/>
		\$64,121.45

OPERATING REVENUES.

Revenue from transportation:		
Passenger revenue		\$105,257.58
Parlor, chair, and special car revenue.....		1,121.50
Mail revenue		237.09
Express revenue		2,068.41
Freight revenue		21.51
		<hr/>
Total revenue from transportation.....		\$108,706.09
Revenue from operations other than transportation:		
Station and car privileges.....	\$242.50	
Rent of buildings and other property.....	372.26	
		<hr/>
Total revenue from operations other than transportation		614.76
		<hr/>
Total operating revenues.....		\$109,320.85

OPERATING EXPENSES.

Way and structures:		
Superintendence of way and structures.....		\$716.37
Maintenance of way		7,527.76
Maintenance of electric lines.....		3,524.85
Buildings and structures.....		487.52
		<hr/>
Total—way and structures.....		\$12,256.50
Equipment:		
Superintendence of equipment.....		\$316.31
Maintenance of cars and locomotives.....		3,699.71
Maintenance of electric equipment of cars and locomotives..		2,580.19
Miscellaneous equipment expenses.....		423.87
		<hr/>
Total—equipment		\$7,020.08
Traffic:		
Traffic expenses		<hr/>
		\$2,464.86
Conducting transportation:		
Superintendence of transportation.....		\$2,725.34
Group I—Power—		
Power purchased		<hr/>
		25,185.20
Group II—Operation of Cars—		
Conductors, motormen, and trainmen.....		20,403.75
Miscellaneous transportation expenses.....		2,116.51
		<hr/>
Total—conducting transportation		\$50,430.80
General and miscellaneous:		
General expenses		\$4,792.80
Injuries and damage.....		5,262.88
Insurance		715.49
Stationery and printing		365.94
Store and stable expenses.....		693.09
		<hr/>
Total—general and miscellaneous.....		\$11,830.20

Recapitulation of expenses:

Way and structures.....	\$12,256.50
Equipment	7,020.08
Traffic	2,464.86
Conducting transportation	50,430.80
General and miscellaneous	11,830.20

Total operating expenses..... \$84,002.44

Ratio of operating expenses to operating revenues, 76.84%.

COMPARATIVE GENERAL BALANCE SHEET.

June 30, 1913		<i>Assets.</i>	June 30, 1914
\$539,585.83	Cost of road.....		\$541,102.23
113,942.46	Cost of equipment.....		113,942.46
40,000.00	General expenditures		40,000.00
20,310.87	Cash and current assets.....		16,877.16
57,204.70	Sinking funds		65,291.87
52,377.90	Deficit		64,121.45
<hr/>			<hr/>
\$823,421.76	Total		\$841,335.17

Liabilities.

\$375,000.00	Capital stock, common.....	\$375,000.00
300,000.00	Funded debt	300,000.00
3,657.06	Current liabilities	2,760.95
	Accrued liabilities:	
3,060.00	Taxes accrued and not yet due.....	.....
84,500.00	Reserves for depreciation.....	98,282.35
57,204.70	Reserves for sinking fund.....	65,291.87
<hr/>		<hr/>
\$823,421.76	Total	\$841,335.17

MILEAGE, TRAFFIC, AND MISCELLANEOUS STATISTICS.

Passenger car mileage.....	399,000
Freight, mail, and express car mileage.....	11,600
<hr/>	<hr/>
Total car mileage.....	410,600
Passenger car hours.....	39,425
Freight, mail, and express car hours.....	2,253
<hr/>	<hr/>
Total car hours.....	41,678
Regular fare passengers carried.....	2,136,595
Passenger revenue	\$105,257.58
Average fare, revenue passengers .....	.04926
Average fare, all passengers.....	.04926
Total revenue from transportation.....	108,706.09
Revenue from transportation per car mile.....	.26475
Revenue from transportation per car hour.....	2.60824
Total revenue from operations other than transportation	614.76
Revenue from operations other than transportation per car mile .....	.00150
Revenue from operations other than transportation per car hour .....	.01475
Total operating revenues.....	109,320.85
Operating revenues per car mile .....	.26625
Operating revenues per car hour.....	2.62299
Total operating expenses.....	84,002.44
Operating expenses per car mile.....	.20458
Operating expenses per car hour.....	2.01551

EMPLOYEES.

General administration:	
General officers and general office clerks.....	4
Maintenance:	
Superintendents, $\frac{1}{2}$; other employees, 29; total.....	29 $\frac{1}{2}$

Transportation:

Superintendent, $\frac{1}{2}$; and others, 36; total.....	36 $\frac{1}{2}$
Total	70
Aggregate salaries and wages paid.....	\$41,464.69

DESCRIPTION OF EQUIPMENT.

Passenger cars:

Closed, electric equipment, 9; non-electric, 5; total....	14
Open, electric equipment	14
Express cars	1
Work cars, electric equipment.....	8
Snowplows	3
Total cars of all classes.....	40

ACCIDENTS TO PERSONS.

Passengers, injured, 1.

EXETER, HAMPTON & AMESBURY STREET RAILWAY COMPANY.

HISTORY.

Organized April 1, 1908, under laws of State of New Hampshire. Not a consolidated company. Original corporation; Exeter, Hampton and Amesbury Street Railway Company; organized under special charter.

PRINCIPAL OFFICERS.

President, Allen Hollis, Concord, N. H.; Vice-President, Charles H. Tenney, Springfield, Mass.; Clerk, John Scammon, Exeter, N. H.; Secretary, Horace P. Wood; Treasurer, Elihu A. Bradley, Boston, Mass.; Auditor, Herbert A. Gidney, Malden, Mass.; Assistant Treasurer, Walter A. Scott; Manager, John McAdams, Hampton, N. H.

DIRECTORS.

Charles H. Tenney, Springfield, Mass.; Bernon E. Helme, Kingston, R. I.; Allen Hollis, Concord, N. H.; Thomas L. Perkins, Ernest G. Cole, Hampton, N. H.; John Templeton, John Scammon, Exeter, N. H.

FACTS PERTAINING TO CONTROL.

Last meeting of stockholders for election of directors, October 27, 1914. Books not closed. Total number of stockholders, one; each share has one vote. No issue of stock has contingent voting rights, or special privileges in the election of directors. Exeter Railway and Lighting Company controls respondent by ownership of all stock and bonds. Not under trustee control.

MILEAGE OF ROAD OPERATED.

Line owned and operated:	
Single track in New Hampshire.....	20.721 miles
Sidings and turnouts.....	.885 miles
Total mileage (all tracks).....	21.606 miles

CAPITALIZATION.

Capital stock authorized, outstanding, not held by respondent:

Common, 1,370 shares, par value \$100 each, total.....	\$137,000.00
Dividends declared during year, none.	
Funded debt authorized, outstanding, not held:	
Mortgage bonds, April 1, 1908-April 1, 1928, entire road.	
Total par value.....	113,000.00
Interest paid during year, 5%, April 1 and Oct. 1, total....	5,650.00

Capital stock per mile of line.....	\$6,611.65
Funded debt per mile of line.....	5,453.40
Total capitalization per mile of line.....	<u>\$12,065.05</u>

EXPENDITURES FOR ROAD AND EQUIPMENT, ETC.

Account.	Total cost to June 30, 1913.	Additions during year.	Deductions during year.	Total cost to June 30, 1914.
Road:				
Ballast, track and roadway	\$140,746.73	\$311.87	....	\$141,058.60
Roadway tools.....	2,524.93	.....	\$5.27	2,519.66
Poles and fixtures, electric line	60,900.85	105.67	....	61,006.52
General office bulidings...	491.97	155.65	....	647.62
Shops and carhouses, land and buildings	32,660.76	367.64	....	33,028.40
Total	<u>\$237,325.24</u>	<u>\$940.83</u>	<u>\$5.27</u>	<u>\$238,260.80</u>
Equipment:				
Cars	\$21,977.15	\$0.26	....	\$21,977.41
Electric equipment of cars	22,946.93	45.31	....	22,992.24
Miscellaneous equipment.	239.78	.....	....	239.78
Total	<u>\$45,163.86</u>	<u>\$45.57</u>	<u>....</u>	<u>\$45,209.43</u>
Recapitulation:				
Road	\$237,325.24	\$940.83	\$5.27	\$238,260.80
Equipment	45,163.86	45.57	....	45,209.43
Total	<u>\$282,489.10</u>	<u>\$986.40</u>	<u>\$5.27</u>	<u>\$283,470.23</u>
Cost of road per mile of line	\$11,453.37	\$45.40	\$0.25	\$11,498.52
Cost of equipment per mile of line	2,179.62	2.20	....	2,181.82
Total per mile of line..	<u>\$13,632.99</u>	<u>\$47.60</u>	<u>\$0.25</u>	<u>\$13,680.34</u>

INCOME ACCOUNT.

Operating revenues	\$56,763.89
Operating expenses	<u>50,416.33</u>
Net operating revenue.....	\$6,347.56
Miscellaneous income:	
Interest on deposits.....	\$18.95
*Other miscellaneous income.....	<u>88.31</u>
	107.26
Gross income less operating expenses.....	<u>\$6,454.82</u>
Deductions from income:	
Taxes—	
On real and personal property.....	\$1,595.69
Interest—	
On funded debt.....	5,650.00
**Other deductions	<u>2,367.55</u>
Total deductions	9,613.24
Net loss	<u>\$3,158.42</u>
Surplus at beginning of year.....	40,724.25
	<u>\$37,565.83</u>
Adjustments	524.51
Surplus at close of year.....	<u>\$37,041.32</u>

*Other miscellaneous income, \$88.31, consists of cash discounts saved by prompt payments on invoices for operating materials.

**Other deductions from income, \$2,367.55, represents the net deficit from the operation of the casino property at Hampton Beach.

OPERATING REVENUES.

Revenue from transportation:	
Passenger revenue	\$53,965.33
Parlor, chair, and special car revenue.....	518.26
Mail revenue	644.05
Express revenue	399.84
Miscellaneous transportation revenue.....	29.17
Total revenue from transportation.....	<u>\$55,556.65</u>
Revenue from operations other than transportation:	
Station and car privileges.....	\$303.00
Rents of tracks and terminals.....	420.00
Rents of buildings and other property.....	60.00
Street lighting	40.00
Miscellaneous	424.24
Total revenue from operations other than transportation	<u>\$1,207.24</u>
Total operating revenues.....	<u>\$56,763.89</u>

OPERATING EXPENSES.

Way and structures:	
Superintendence of ways and structures.....	\$675.00
Maintenance of way	8,059.23
Maintenance of electric lines	2,447.08
Buildings and structures.....	389.93
Total—way and structures.....	<u>\$11,571.16</u>
Equipment:	
Maintenance of cars and locomotives.....	\$2,524.33
Maintenance of electric equipment of cars and locomotives	2,219.42
Miscellaneous equipment expenses.....	1,159.25
Total—equipment	<u>\$5,903.00</u>
Traffic:	
Traffic expenses	\$1,975.08
Conducting transportation:	
Group I—Power—	
Power purchased	\$8,890.88
Group II—Operation of Cars—	
Conductors, motormen, and trainmen.....	12,165.65
Miscellaneous transportation expenses.....	2,815.44
Total—conducting transportation	<u>\$23,871.97</u>
General and miscellaneous:	
General expenses	\$3,300.07
Injuries and damages.....	1,622.23
Insurance	588.32
Stationery and printing.....	331.16
Rent of land and buildings.....	1,253.26
Total—general and miscellaneous.....	<u>\$7,095.04</u>
Recapitulation of expenses:	
Way and structures.....	\$11,571.24
Equipment	5,903.00
Traffic	1,975.08
Conducting transportation	23,871.97
General and miscellaneous.....	7,095.04
Total operating expenses.....	<u>\$50,416.33</u>
Ratio of operating expenses to operating revenues, 88.82%	

COMPARATIVE GENERAL BALANCE SHEET.

Assets.

June 30, 1913.		June 30, 1914.
\$237,325.24	Cost of road	\$238,260.80
45,163.86	Cost of equipment	45,209.43
10,644.23	Cash and current assets.....	10,677.79
	Other assets:	
8,119.45	Sinking and other special funds.....	4,368.56
241.32	Forestry .....	.....
<u>\$301,494.10</u>	Total	<u>\$298,516.58</u>

Liabilities.

\$137,000.00	Capital stock, common.....	\$137,000.00
113,000.00	Funded debt	113,000.00
2,541.30	Current liabilities	2,289.65
	Accrued liabilities:	
132.51	Taxes accrued and not yet due.....	146.39
1,412.50	Interest on funded debt not yet due.....	1,412.50
6,683.54	Reserves	7,626.72
40,724.25	Surplus	37,041.32
<u>\$301,494.10</u>	Total	<u>\$298,516.58</u>
Passenger car mileage.....		263,787
Freight, mail, and express car mileage.....		5,776
Total car mileage.....		<u>269,563</u>
Passenger car hours.....		22,032
Freight, mail, and express car hours.....		481
Total car hours.....		<u>22,513</u>
Regular fare passengers carried.....		962,498
Free transfer passengers carried.....		21,077
Total passengers carried.....		<u>983,575</u>
Passenger revenue	\$53,965.33	
Average fare, revenue passengers.....	.05606	
Average fare, all passengers.....	.05486	
Total revenue from transportation.....	55,556.65	
Revenue from transportation per car mile.....	.20610	
Revenue from transportation per car hour.....	2.46776	
Total revenue from operations other than transportation	1,222.24	
Revenue from operations other than transportation per		
car mile .....	.00453	
Revenue from operations other than transportation per		
car hour .....	.05429	
Total operating revenues.....	56,778.89	
Operating revenues per car mile .....	.21063	
Operating revenues per car hour	2.52205	
Total operating expenses.....	50,416.33	
Operating expenses per car mile .....	.18703	
Operating expenses per car hour	2.23943	

EMPLOYEES.

General administration:	
General officers, 6; general office clerks, 2; total....	8
Maintenance:	
Other employees	10
Transportation:	
Superintendent and 28 others, total.....	29
Total employees	<u>47</u>
Aggregate salaries and wages paid, \$28,642.07.	

DESCRIPTION OF EQUIPMENT.

Passenger cars with electric equipment:

Closed, 5; open, 11; combination, 1; total, 17.

Other cars with electric equipment:

Express, 1; work, 2; snowplows, 3; miscellaneous, 1; total, 7.

Total cars of all classes, 24.

ACCIDENTS TO PERSONS.

One boy injured.

EXETER RAILWAY AND LIGHTING COMPANY.

PRINCIPAL OFFICERS.

President, Charles H. Tenney, Boston, Mass.; Vice-President, Allen Hollis, Concord, N. H.; Treasurer, Elihu A. Bradley, Boston, Mass.; Clerk of Corporation, Allen Hollis, Concord, N. H.; Secretary, Horace P. Wood; Auditor, Herbert A. Gidney, Boston, Mass.

DIRECTORS.

Charles H. Tenney, Hartford, Conn.; Bernon E. Helme, Kingston, R. I.; Allen Hollis, Concord, N. H.; Sylvester C. Dunham, Hartford, Conn.; Howard B. Tuttle, Naugatuck, Conn.

ORGANIZATION AND CHARACTER OF BUSINESS.

Corporation commenced operation April 1, 1908.

This is a holding company only, owning the stock of the Exeter and Hampton Electric Company, and the stock and bonds of the Exeter, Hampton & Amesbury Street Railway.

GENERAL EXHIBIT FOR THE YEAR.

Dividends on stock owned.....	\$6,750.00	
Interest on bonds owned	5,650.00	
Interest on bills receivable	451.58	
Interest on bank deposits	100.30	
Gross income		\$12,951.88
Expenses and charges upon income accrued during the year:		
Salaries and maintenance of organization..	\$1,077.13	
Interest and discount on unfunded debts and loans	654.00	
Taxes	81.79	
Total expenses and charges upon income.....		1,812.92
Net divisible income.....		\$11,138.96
Dividends declared:		
2% on \$270,000, common stock	\$5,400	
6% on \$70,000, preferred stock	4,950	
Total dividends declared.....		10,350.00
Surplus for the year ending June 30, 1914.....		\$788.96
Amount of surplus June 30, 1913.....		13,548.98
Total surplus June 30, 1914.....		\$14,337.94

GENERAL BALANCE SHEET.

Assets.

Investment account:	
Exeter & Hampton Electric Company, stock, 1,000 shares	\$125,000.00
Exeter, Hampton & Amesbury Street Railway, stock, 1,370 shares	137,000.00
Exeter, Hampton & Amesbury Street Railway, bonds, 113 @ \$1,000, 5%	113,000.00
Total—permanent investments	\$375,000.00
Cash and current assets:	
Cash	\$2,836.33
Bills and accounts receivable	147.25
Interest accrued but not due	1,412.50
Total—cash and current assets	4,396.08
Total	\$379,396.08

Liabilities.

Capital stock:	
Common	\$270,000.00
Preferred	95,000.00
Total capital stock	\$365,000.00
Taxes accrued and not yet due	58.14
Profit and loss balance—surplus	14,337.94
Total	\$379,396.08

CAPITAL STOCK.

Authorized, issued, and outstanding:	
Common, 2,700 shares; preferred, 950 shares; total par value	\$365,000.00
Dividends declared and paid during year:	
Common, 2%; preferred, 6%; total	10,350.00
Number of stockholders, common 23; preferred, 26.	
Number in New Hampshire, common 2; preferred, 4.	
Stock held in New Hampshire, common, 51 shares; preferred, 42 shares.	

KEENE ELECTRIC RAILWAY COMPANY.

HISTORY.

Organized March 7, 1899, under laws of State of New Hampshire.

PRINCIPAL OFFICERS.

President, Acting, Thomas T. Robinson, Boston, Mass.; Secretary, Clarence L. Wyman, Keene, N. H.; Treasurer, T. Russell Robinson, New York, N. Y.; Attorney, Charles H. Hersey, Keene, N. H.; Auditor, Charles E. Stanwood; General Manager, Thomas T. Robinson, Boston, Mass.; General Superintendent, Clarence L. Wyman, Keene, N. H.

DIRECTORS.

T. Russell Robinson, New York, N. Y.; Thomas T. Robinson, Boston, Mass.; Louis P. Howe, Marlboro, Mass.; George A. Litchfield, Keene, N. H.; Charles O. Whitney, Marlboro, N. H.

FACTS PERTAINING TO CONTROL.

Last meeting of stockholders for election of directors, September 30, 1913. Total number of stockholders of record, 10. Each share of stock has one vote. No issue of securities has contingent voting rights or special privileges in the election of directors. Granite State Association, Nashua Trust Company, trustee, controlled the respondent as trustee on June 30, 1914, in behalf of sundry shareholders, a list of whom is not filed with the Railway Company.

MILEAGE OF ROAD OPERATED.

Line owned and operated:	
Main line, Keene to Marlboro and to Swanzey Factory..	8.34 miles
Sidings and turnouts.....	.24
Total mileage operated (all tracks).....	8.58 miles

CAPITALIZATION.

Capital stock, common, authorized, 2,200 shares; outstanding and not held by respondent, 145 shares; par value \$100 each; total.....	\$145,000.00
Dividends declared during year, none.	
Funded debt, authorized and outstanding:	
First mortgage bonds on entire line, 1900-1920, not held by respondent, par value.....	\$80,000.00
Second mortgage bonds, on entire line 1907-1922, par value held by respondent, \$5,000; not held, \$55,000; total	60,000.00
Mortgage notes, on 7 acres of land in Swanzey, 1910-1915, not held by respondent, par value.....	900.00
Total, not held.....	\$140,900.00
Interest accrued and paid on mortgage bonds 5%, total...	\$7,000.00
Interest accrued and paid on mortgage notes 6%, total...	54.00
Total interest on funded debt.....	\$7,054.00
Capital stock per mile of line, 8.45 miles.....	17,386.09
Funded debt	16,894.49
Total capitalization per mile of line.....	\$34,280.58

EXPENDITURES FOR ROAD.

Account.	Total cost to June 30, 1913.	Additions during year.	Total cost to June 30, 1914.
Road:			
Land and buildings.....	\$18,938.45	.....	\$18,938.45
Steam plant	14,896.19	.....	14,896.19
Electric plant	10,479.30	.....	10,479.30
Track and roadway.....	83,054.17	\$1,077.30	84,131.47
Street improvement.....	11,616.16	.....	11,616.16
Overhead construction...	18,901.09	.....	18,901.09
Engineering charges.....	12,539.05	.....	12,539.05
Swanzey extension.....	63,025.61	.....	63,025.61
Total	\$233,450.02	\$1,077.30	\$234,527.32
Equipment:			
Cars, trucks, and motors.	\$31,669.38	.....	\$31,669.38
General expenditures:			
Tools and station appliances	\$1,387.29	.....	\$1,387.29
Bond sale	3,687.89	.....	3,687.89
Park land and construction	6,903.90	\$552.91	7,456.81
Total	\$11,979.08	\$552.91	\$12,531.99

Account.	Total cost to June 30, 1913.	Additions during year.	Total cost to June 30, 1914.
Recapitulation:			
Road	\$233,450.02	\$1,077.30	\$234,527.32
Equipment	31,669.38	.....	31,669.38
General expenditures....	11,979.08	552.91	12,531.99
Total	\$277,098.48	\$1,630.21	\$278,728.69
Cost of road per mile of line	\$27,991.60	.....	\$28,120.78
Cost of equipment per mile of line	3,797.29	.....	3,797.29
General expenditures per mile of line.....	1,436.34	.....	1,502.63
Total per mile of line..	\$33,225.23		\$33,420.70

INCOME ACCOUNT.

Operating revenues	\$33,350.85
Operating expenses	23,698.21
Net operating revenue.....	\$9,652.64
Miscellaneous income:	
Income from securities owned.....	250.00
Gross income less operating expenses.....	\$9,902.64
Deductions from income:	
Taxes	\$1,925.98
Interest on funded debt	7,054.00
Interest on floating debt	419.87
Total deductions	9,399.85
Surplus for year.....	\$502.79
Deficit at beginning of year.....	11,218.98
Total deficit	\$10,716.19
Profit or loss adjustments during year:	
Credits—	
Adj. accts. payable prior to 1913.....	\$50.00
Debits—	
Adj. Superintendent's salary, 1912.....	118.46
Accident settlement	1,516.00
Adj. of accounts payable.....	390.78
Adj. of power bought	15.75
	1,990.99
Deficit at close of year.....	\$12,707.18

OPERATING REVENUES.

Revenue from transportation:	
Passenger revenue	\$32,262.55
Parlor, chair, and special car revenue.....	217.00
Mail revenue	200.00
Freight revenue	16.30
Total revenue from transportation.....	\$32,695.85
Revenue from operations other than transportation:	
Station and car privileges.....	\$200.00
Park receipts	309.00
Miscellaneous	146.00
Total revenue from operations other than transportation	\$655.00
Total operating revenues.....	\$33,350.85

RAILWAY FUNDED DEBT OWNED.

Funded debt of respondent corporation:

Second mortgage bonds—

Par value of funded debt owned, not held in sinking or other funds, pledged.....	\$5,000.00
Interest, amount accrued, rate 5%.....	250.00

OPERATING EXPENSES.

Way and structures:

Superintendence of way and structures*	
Maintenance of way	\$1,801.93
Maintenance of electric lines	383.91
Buildings and structures.....	78.31
Total—way and structures.....	\$2,264.15

Equipment:

Superintendence of equipment*	
Maintenance of power equipment	\$127.12
Maintenance of cars and locomotives	1,557.22
Maintenance of electric equipment of cars and locomotives	1,212.98
Total—equipment	\$2,897.32

Conducting transportation:

Superintendence of transportation*

Group I—power—

Power-plant employees	\$868.61
Fuel for power.....	445.79
Other power supplies and expenses.....	64.56
Power purchased	6,086.65

Group II—operation of cars—

Conductors, motormen, and trainmen.....	5,922.14
Miscellaneous transportation expenses.....	930.57

Total conducting transportation..... \$14,318.32

General and miscellaneous:

General expenses	\$2,818.51
Other operations—Dr., maintaining park.....	684.00
Injuries and damages.....	1.00
Insurance	582.69
Stationery and printing.....	75.57
Legal services	56.65

Total—general and miscellaneous..... \$4,218.42

Recapitulation of expenses:

Way and structures.....	\$2,264.15
Equipment	2,897.32
Conducting transportation	14,318.32
General and miscellaneous.....	4,218.42

Total operating expenses..... \$23,698.21

Ratio of operating expenses to operating revenues, 71%

COMPARATIVE GENERAL BALANCE SHEET.

Assets.

June 30, 1913.		June 30, 1914.
\$233,450.02	Cost of road.....	\$234,527.32
31,669.38	Cost of equipment.....	31,669.38
11,979.08	General expenditures	12,531.99
5,000.00	Funded debt owned.....	5,000.00
2,233.77	Cash and current assets.....	2,099.87
11,218.98	Deficit	12,707.18
\$295,551.23	Total	\$298,535.74

*One general superintendent (salary \$1,040.00 per year).

Liabilities.

\$145,000.00	Capital stock, common.....	\$145,000.00
140,900.00	Funded debt	140,900.00
8,651.23	Current liabilities	11,635.74
	Accrued liabilities:	
1,000.00	Interest on funded debt accrued and not yet due	1,000.00
\$295,551.23	Total	\$298,535.74

MILEAGE, TRAFFIC, AND MISCELLANEOUS STATISTICS.

Passenger car mileage	136,194
Passenger car hours	11,855
Regular fare and revenue transfer passengers carried....	563,669
Passenger revenue	\$32,262.55
Average fare, revenue passengers.....	.05724
Total revenue from transportation.....	32,695.85
Revenue from transportation per car mile .....	.24007
Revenue from transportation per car hour	2.75882
Total revenue from operations other than transportation..	655.00
Revenue from operations other than transportation per car mile .....	.00480
Revenue from operations other than transportation per car hour .....	.05525
Total operating revenues.....	33,350.85
Operating revenues per car mile .....	.24487
Operating revenues per car hour	2.81323
Total operating expenses.....	23,698.21
Operating expenses per car mile .....	.17400
Operating expenses per car hour	1.99900

EMPLOYEES.

General administration:	
General officers and office clerks.....	2
Maintenance:	
Superintendent and other employees.....	5
Transportation:	
Other employees	12
Total	19
Aggregate salaries and wages paid.....	\$11,000.89

DESCRIPTION OF EQUIPMENT.

Passenger cars, with electric equipment, closed, 4; open, 5; total, 9.
 Work cars without electric equipment, 2; snowplows, 2; with electric equipment, 2; total, all classes, 13.

ACCIDENTS TO PERSONS.

None.

LACONIA STREET RAILWAY.

HISTORY.

Organized in 1882 under laws of the State of New Hampshire. Date of charter, July 27, 1881. Amended, July 11, 1883; March 31, 1893. Not a consolidated company.

Not a reorganized company, although name has been changed. The original name was Laconia and Lake Village Horse Railroad.

PRINCIPAL OFFICERS.

President, Harry L. Pierce, Brookline, Mass.; Secretary, George P. Munsey, Laconia, N. H.; Treasurer, Harry G. Lowe, Leominster, Mass.; Attorney, F. M. Beckford; Auditor, Geo. P. Munsey; General Superintendent, L. S. Pierce, Laconia, N. H.

DIRECTORS.

Harry L. Pierce, Brookline, Mass.; Harry G. Lowe, Jas. H. P. Dyer, Chas. E. Hudson, Leominster, Mass.; Edmund Little, S. B. Smith, L. S. Pierce, Laconia, N. H.

FACTS PERTAINING TO CONTROL.

Last meeting of stockholders for election of directors, September 8, 1913. Last closing of books, June 30, 1914. Total number of stockholders of record 36. Each share of stock has one vote. No issue of securities has contingent voting rights or special privileges in the election of directors. Corporation uncontrolled.

MILEAGE OF ROAD OPERATED.

Main line, Laconia to Weirs.....	8.36 miles
Sidings and turnouts.....	.51
Total mileage operated (all tracks).....	8.87 miles

CAPITALIZATION.

Capital stock authorized, outstanding, not held by respondent:

Common, 2,000 shares, par value \$50 each, total.....	\$100,000.00
Preferred, 400 shares, par value \$100 each, total.....	40,000.00

Total	\$140,000.00
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Dividends declared during year, none.

Funded debt, authorized, outstanding, not held by respondent:

First mortgage bonds on all property of company, 1899-1919, par value	\$91,000.00
Second mortgage bonds on all property of company, 1904-1919, par value	40,000.00

Total	\$131,000.00
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Interest accrued and paid during year, 5%.....	6,550.00
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Capital stock per mile of line, 8.36 miles.....	16,746.41
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Funded debt per mile of line, 8.36 miles.....	15,669.86
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Total	\$32,416.27
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EXPENDITURES FOR ROAD, EQUIPMENT, ETC.

Account.	Total cost to June 30, 1914.
Road:	
Engineering and superintendence.....	\$3,200.00
Land used in electric railway operations and buildings..	22,927.92
Roadbed and tracks.....	116,026.19
Overhead line	27,196.21
Power-plant	58,304.06
Total	\$227,654.38
Equipment:	
Cars, trucks, etc.....	\$31,257.50
Electric equipment of cars.....	21,239.09
Miscellaneous equipment	5,264.88
Total	\$57,761.47

Recapitulation:

Road	\$227,654.38
Equipment	57,761.47
Total	<u>\$285,415.85</u>
Cost of road per mile of line.....	\$27,231.38
Cost of equipment per mile of line.....	6,909.26
Total per mile of line.....	<u>\$34,140.64</u>

INCOME ACCOUNT.

Operating revenues	\$40,592.87
Operating expenses	<u>28,942.42</u>
Gross income less operating expenses.....	\$11,650.45
Deductions from income:	
Taxes—	
On real and personal property, local....	\$129.05
On capital stock, state.....	1,178.21
On earnings, income	69.26
Interest—	
On funded debt	6,550.00
On floating debt	<u>851.08</u>
Total deductions	<u>8,777.60</u>
Surplus for year.....	\$2,872.85
Deficit at beginning of year.....	<u>7,853.22</u>
Deficit at close of year.....	<u>\$4,980.37</u>

OPERATING REVENUES.

Revenue from transportation:	
Passenger revenue	\$39,557.67
Freight revenue	<u>124.70</u>
Total revenue from transportation.....	\$39,682.37
Revenue from operations other than transportation:	
Rents of buildings and other property.....	748.00
Miscellaneous—advertising and rents.....	<u>162.50</u>
Total operating revenues.....	<u>\$40,592.87</u>

OPERATING EXPENSES.

Way and structures:	
Maintenance of way, track and roadway.....	\$2,617.30
Removal of snow.....	353.65
Maintenance of electric lines.....	1,069.77
Buildings and structures.....	<u>187.13</u>
Total—way and structures.....	\$4,227.85
Equipment:	
Maintenance of power equipment	\$296.54
Maintenance of cars and equipment	1,759.19
Maintenance of electric equipment of cars.....	<u>2,350.75</u>
Total—equipment	\$4,406.48
Conducting transportation:	
Superintendence of transportation.....	\$1,248.00
Office expenses	825.39
Group I—power—	
Fuel for power.....	318.28
Other power supplies and expenses.....	11.99
Power purchased	6,815.26
Group II—operation of cars—	
Conductors, motormen, and trainmen.....	7,095.82
Miscellaneous transportation expenses.....	<u>66.60</u>
Total—conducting transportation	<u>\$16,381.34</u>

General and miscellaneous:

General expenses	\$743.12
Other operations—Dr., amusements.....	210.00
Injuries and damages.....	785.00
Insurance	926.24
Legal expense	250.00
Miscellaneous repairs	760.50
Rep. real estate.....	251.89

Total—general and miscellaneous..... \$3,926.75

Recapitulation of expenses:

Way and structures.....	\$4,227.85
Equipment	4,406.48
Conducting transportation	16,381.34
General and miscellaneous.....	3,926.75

Total operating expenses..... \$28,942.42

Ratio of operating expenses to operating revenues, 71.30%.

COMPARATIVE GENERAL BALANCE SHEET.

June 30, 1913.	<i>Assets.</i>	June 30, 1914.
\$227,654.38	Cost of road.....	\$227,654.38
57,761.47	Cost of equipment.....	57,761.47
.....	Stocks owned	1,000.00
5,056.33	Cash and current assets.....	4,817.58
7,853.22	Deficit	4,980.37
<u>\$298,325.40</u>	Total	<u>\$296,213.80</u>

Liabilities.

\$40,000.00	Capital stock, preferred.....	\$40,000.00
100,000.00	Capital stock, common.....	100,000.00
131,000.00	Funded debt	131,000.00
22,878.07	Current liabilities	24,083.19
	Accrued liabilities:	
	Interest on funded debt accrued and not yet due	1,091.67
4,391.67	Miscellaneous interest accrued and not yet due	39.84
55.66		
<u>\$298,325.40</u>	Total	<u>\$296,213.80</u>

MILEAGE, TRAFFIC, AND MISCELLANEOUS STATISTICS.

Passenger car mileage	146,399
Passenger car hours	16,953
Regular fare passengers carried.....	711,934
Passenger revenue	\$39,557
Average fare, revenue passengers .....	.05556
Average fare, all passengers .....	.05556
Total revenue from transportation.....	39,682.00
Revenue from transportation per car mile .....	.27105
Revenue from transportation per car hour	2.34072
Total revenue from operations other than transportation....	910.00
Revenue from operations other than transportation per car mile .....	.00622
Revenue from operations other than transportation per car hour .....	.05376
Total operating revenues.....	40,592.00
Operating revenues per car mile .....	.27727
Operating revenues per car hour	2.39443
Total operating expenses.....	28,942.00
Operating expenses per car mile .....	.19769
Operating expenses per car hour	1.70721

EMPLOYEES.

General officers and office clerks.....	2
Maintenance:	
Other employees	2
Transportation:	
Superintendent and other employees.....	15
Total	19
Aggregate salaries and wages paid.....	\$10,867.49

DESCRIPTION OF EQUIPMENT.

Passenger cars, with electric equipment:	
Closed, 5; open, 6; total.....	11
Combination cars, 1; snowplow, 1; total.....	2
Total cars of all classes.....	13

ACCIDENTS TO PERSONS.

None.

MANCHESTER STREET RAILWAY.

HISTORY.

Organized July 16, 1864, under laws of State of New Hampshire.

PRINCIPAL OFFICERS.

President, E. C. Foster, Secretary, Edwin F. Jones, Manchester, N. H.;
 Treasurer, Nathan Anthony, Boston, Mass.; General Manager, J. Brodie
 Smith, General Superintendent, Thomas H. Kendrigan, Manchester, N. H.

DIRECTORS.

E. C. Foster, Edwin F. Jones, Walter M. Parker, Manchester, N. H.;
 Philip L. Saltonstall, Boston, Mass.; Frank S. Streeter, Concord, N. H.

FACTS PERTAINING TO CONTROL.

Last meeting of stockholders for election of directors: September 12, 1914. Total number of stockholders of record, 1. Each share of stock has one vote. No issue of securities has contingent voting rights, or special privileges in the election of directors. The Manchester Traction, Light & Power Company had sole direct control of the respondent on June 30, 1914, established by ownership of 100% of stock. No individual, association, or corporation, as trustee, controlled the respondent on June 30, 1914.

MILEAGE OF ROAD OPERATED.

Line owned and operated:	
Main track, in Manchester, and Manchester to Goffstown and Goffe's Falls	18.815 miles
Second track	10.095
Sidings and turnouts.....	3.816
Total mileage operated (all tracks).....	42.726 miles

CAPITAL STOCK.

Common, authorized and outstanding:	
12,195 shares, par value \$100 each.....	\$1,219,500.00
Dividends declared and paid during year, 6%.....	73,170.00
Capital stock per mile of line, 28.815 miles.....	42,321.71

CURRENT ASSETS AND LIABILITIES.

Cash and current assets:	
Cash	\$6,560.18
Accounts receivable	2,470.61
Materials and supplies	50,084.65
Prepaid accounts	185.55
Total—cash and current assets	\$59,300.99
Balance—current liabilities	128,781.63
Total	\$188,082.62
Current liabilities:	
Loans and notes payable	\$166,500.00
Accounts payable	21,582.62
Total	\$188,082.62

EXPENDITURES FOR ROAD, EQUIPMENT, ETC.

Account.	Total cost to June 30, 1913.	Additions during year.	Total cost to June 30, 1914.
Road:			
Engineering and superintendence	\$716,237.51	\$14,340.64	\$730,578.15
Right of way			
Other land used in electric railway operations			
Grading, ballast, ties			
Rails, rail fastenings, and joints			
Special work, paving			
Underground construction, tunnels			
Track laying and surfacing, roadway tools			
Elevated structures and foundations			
Bridges, trestles, and culverts			
Crossings, fences, cattle guards, and signs	121,336.62	2,160.97	123,497.59
Interlocking and other signal apparatus			
Telegraph and telephone lines			
Poles and fixtures			
Underground conduits			
Transmission system			
Distribution system			
Shops and carhouses			
Stations, waiting rooms, and miscellaneous buildings	161,575.02	.....	161,575.02
Park and resort property	18,315.31	.....	18,315.31
Total	\$1,017,464.46	\$16,501.61	\$1,033,966.07
Equipment:			
Cars	\$256,669.02	.....	\$256,669.02
Electric equipment of cars	124,622.57	.....	124,622.57
Miscellaneous equipment	350.00	.....	350.00
Total	\$381,641.59	.....	\$381,641.59
Recapitulation:			
Road	\$1,017,464.46	\$16,501.61	\$1,033,966.07
Equipment	381,641.59	.....	381,641.59
Total	\$1,399,106.05	\$16,501.61	\$1,415,607.66

Account.	Total cost to June 30, 1913.	Additions during year.	Total cost to June 30, 1914.
Cost of road per mile of line	35,310.23	572.68	35,882.91
Cost of equipment per mile of line	13,244.54	.....	13,244.54
Total per mile of line	<u>\$48,554.77</u>	<u>\$572.68</u>	<u>\$49,127.45</u>

INCOME ACCOUNT.

Operating revenues		\$477,113.09
Operating expenses		<u>352,542.81</u>
Gross income, less operating expenses.....		\$124,570.28
Deductions from income:		
Taxes on real and personal property.....	\$22,500.00	
Interest on floating debt.....	7,596.76	
Depreciation	<u>19,084.52</u>	
Total deductions		<u>49,181.28</u>
Net income		\$75,389.00
Dividends, 6% on \$1,219,500, common stock.....		<u>73,170.00</u>
Surplus for year.....		\$2,219.00
Surplus at beginning of year.....		63,694.86
Profit or loss adjustments during year:		
Credits:		
Insurance	\$614.27	
Debits:		
Insurance	17.26	
Taxes	3,394.93	
Stock	<u>2,772.01</u>	
	\$6,184.20	
Total adjustments		<u>5,569.93</u>
Surplus at close of year.....		\$60,343.93

OPERATING REVENUES.

Revenues from transportation:		
Passenger revenue		\$474,434.75
Mail revenue		250.00
Freight revenue		<u>74.02</u>
Total revenue from transportation.....		\$474,758.77
Revenue from operations other than transportation:		
Station and car privileges.....		<u>2,354.32</u>
Total operating revenues.....		\$477,113.09

OPERATING EXPENSES.

Way and structures:		
Maintenance of roadway and track.....		\$25,487.18
Other maintenance of way.....		1,734.22
Poles and fixtures.....		965.37
Distribution system		2,176.13
Miscellaneous electric line expenses.....		293.82
Buildings and structures.....		<u>958.54</u>
Total—way and structures.....		\$31,615.26

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Equipment:

Superintendence of equipment.....	\$797.32
Maintenance of cars and locomotives.....	13,384.86
Maintenance of electric equipment of cars and locomotives.....	7,095.87
Miscellaneous equipment expenses.....	1,139.31

Total—equipment \$22,417.36

Traffic:

Traffic expenses	\$1,032.98
------------------------	------------

Conducting transportation:

Superintendence of transportation.....	\$1,886.92
Group I—power—	
Power purchased	121,496.86
Group II—operation of cars—	
Passenger conductors, motormen, and trainmen.....	\$91,049.91
Miscellaneous car-service employees and expenses....	9,020.28
Station employees and expenses.....	33.07
Carhouse employees and expenses.....	3,699.67
Signal, interlocking, telephone and telegraph systems	5.40
Loss and damage.....	439.23
Other transportation expenses.....	1,358.79

Total—conducting transportation \$228,990.13

General and miscellaneous:

Salaries and expenses of general officers and general office clerks	\$12,552.35
General office supplies and expenses.....	2,429.07
Miscellaneous general expenses.....	6,204.86
Injuries and damages.....	28,468.12
Insurance	3,000.00
Stationery and printing.....	201.90
Store expenses	974.11
Stable expenses	903.85
Rent of equipment.....	2,606.60
Removal of snow and ice.....	6,933.29
Massabesic Park expense.....	791.74
Pine Island Park expense.....	3,421.19

Total—general and miscellaneous..... \$68,487.08

Recapitulation of expenses:

Way and structures.....	\$31,615.26
Equipment	22,417.36
Traffic	1,032.98
Conducting transportation	228,990.13
General and miscellaneous.....	68,487.08

Total operating expenses..... \$352,542.81

Ratio of operating expenses to operating revenues, 73.89%

COMPARATIVE GENERAL BALANCE SHEET.

June 30, 1913.		Assets.	June 30, 1914.
\$1,017,464.46	Cost of road		\$1,033,966.07
381,641.59	Cost of equipment		381,641.59
48,341.12	Cash and current assets.....		59,300.99
18,330.41	Accrued accident insurance.....		32,403.47
13,890.64	Less depreciation		32,975.16
\$1,451,886.94	Total		\$1,474,336.96
		Liabilities.	
\$1,219,500.00	Capital stock, common.....		\$1,219,500.00
165,314.92	Current liabilities		188,082.62
3,377.16	Accrued liabilities:		
	Taxes accrued and not yet due.....		6,000.00
	Miscellaneous interest accrued and not yet due		410.41
63,694.86	Surplus		60,343.93
\$1,451,886.94	Total		\$1,474,336.96

MILEAGE, TRAFFIC, AND MISCELLANEOUS STATISTICS.

Passenger car mileage	1,344,415
Passenger car hours	177,010
Regular fare passengers carried.....	9,488,695
Revenue transfer passengers carried.....	2,174,717
Total passengers carried.....	11,663,412
Passenger revenue	\$474,434.75
Average fare, revenue passengers .....	.04067
Average fare, all passengers (including transfer passengers)	.04067
Total revenue from transportation.....	474,758.77
Revenue from transportation per car mile .....	.35313
Revenue from transportation per car hour	2.68210
Total revenue from operations other than transportation....	2,354.32
Revenue from operations other than transportation per car mile .....	.00175
Revenue from operations other than transportation per car hour .....	.01330
Total operating revenues.....	477,113.09
Operating revenues per car mile .....	.35489
Operating revenues per car hour	2.69540
Total operating expenses.....	352,542.81
Operating expenses per car mile .....	.26223
Operating expenses per car hour	1.99165

EMPLOYEES.

General administration:	
General officers, 4; general office clerks, 6; total.....	10
Maintenance:	
Superintendents, 3; other employees, 77; total.....	80
Transportation:	
Superintendents, 3; other employees, 159; total.....	162
Total employees	252
Aggregate salaries and wages paid, \$145,270.22	

DESCRIPTION OF EQUIPMENT.

Closed passenger cars.....	40
Open passenger cars.....	54
Total passenger cars.....	94
Work cars	4
Snowplows	7
Sweepers	1
Tower car	1
Emergency car	1
Total cars of all classes.....	108
All with electric equipment.	

ACCIDENTS TO PERSONS.

Passengers injured, 72; other persons killed, 1.

MANCHESTER & DERRY STREET RAILWAY.

HISTORY.

Organized September 19, 1906, as the Derry & Goff's Falls Street Railway; name changed February 16, 1907, to Manchester & Derry Street Railway, under the laws of the State of New Hampshire.

PRINCIPAL OFFICERS.

President, Roger G. Sullivan, Secretary, Albert O. Brown, Manchester, N. H.; Treasurer, Nathan Anthony, Boston, Mass.; General Manager, J. Brodie Smith, Manchester, N. H.

DIRECTORS.

Roger G. Sullivan, J. Brodie Smith, Leonard J. Farrell, Manchester, N. H.; Stillman F. Kelley, Nathan Anthony, Boston, Mass.

FACTS PERTAINING TO CONTROL.

Last meeting of stockholders for election of directors: September 12, 1913. Number of stockholders of record, 1. Each share of stock has one vote. No issue of securities has contingent voting rights or special privileges in the election of directors. Manchester Traction, Light & Power Company has sole direct control of respondent established by ownership of 100% of stock. No individual, association, or corporation, as trustee, controlled the respondent on June 30, 1914.

MILEAGE OF ROAD OPERATED.

Line owned and operated:	
Main track, Cohas Junction to Derry.....	8.030 miles
Sidings and turnouts.....	.388 miles
Total mileage operated (all tracks).....	8.418 miles

CAPITALIZATION.

Capital stock, authorized, and outstanding:	
Common, 1,750 shares, par value \$100 each.....	\$175,000.00
Dividends, declared, and paid during year, none.	
Funded debt, authorized, and outstanding:	
Mortgage bonds: 1907-1927, on all property of company, par value authorized, \$500,000, par value, outstanding	\$125,000.00
Interest accrued and paid during year, 5%.....	6,250.00
Capital stock, per mile of line, 8.03 miles.....	21,793.27
Funded debt, per mile of line, 8.03 miles.....	15,566.63
Total capitalization per mile of line.....	\$37,359.90

CURRENT ASSETS AND LIABILITIES.

Cash and current assets:	
Cash	\$377.33
Accounts receivable	49.02
Total—cash and current assets.....	\$426.35
Balance—current liabilities	39,223.28
Total	\$39,649.63
Current liabilities:	
Loans and notes payable.....	\$38,500.00
Accounts payable	1,149.63
Total—current liabilities	\$39,649.63

EXPENDITURES FOR ROAD, EQUIPMENT, ETC.

Account.	Total cost to June 30, 1913.	Additions during year.	Total cost to June 30, 1914.
Road:			
Engineering and superintendence	\$9,681.93	.....	\$9,681.93
Right of way	8,486.20	.....	8,486.20
Grading	183,615.98	\$372.67	183,988.65
Ballast			
Ties			
Rails, rail fastenings, and joints			
Special work			
Underground construction ..			
Paving			
Track laying and surfacing			
Roadway tools			
Tunnels			
Elevated structures and foundations	35,882.01	.....	35,882.01
Bridges, trestles, and culverts			
Crossings, fences, cattle guards, and signs			
Interlocking and other signal apparatus			
Telegraph and telephone lines			
Poles and fixtures			
Underground conduits			
Transmission system			
Distribution system			
Dams, canals, and pipe lines			
Substation buildings	7,500.00	.....	7,500.00
Substation equipment	17,432.19	.....	17,432.19
Total	<u>\$262,598.31</u>	<u>\$372.67</u>	<u>\$262,970.98</u>
Equipment:			
Cars	\$23,225.40	.....	\$23,225.40
Electric equipment of cars ..	15,964.45	.....	15,964.45
Miscellaneous equipment	9,176.53	.....	9,176.53
Total	<u>\$48,366.38</u>	<u>.....</u>	<u>\$48,366.38</u>
Recapitulation:			
Road	\$262,598.31	\$372.67	\$262,970.98
Equipment	48,366.38	.....	48,366.38
Total	<u>\$310,964.69</u>	<u>\$372.67</u>	<u>\$311,337.36</u>
Cost of road per mile of line ..	\$32,702.15	.....	\$32,748.56
Cost of equipment per mile of line	6,023.21	.....	6,023.21
Total per mile of line	<u>\$38,725.36</u>	<u>.....</u>	<u>\$38,771.77</u>

INCOME ACCOUNT.

Operating revenues	\$29,608.87
Operating expenses	28,153.01
Gross income less operating expenses	<u>\$1,455.86</u>
Deductions from income:	
Interest—	
On funded debt	\$6,250.00
On floating debt	1,969.86
	<u>8,219.86</u>
Deficit for year	<u>\$6,764.00</u>
Deficit at beginning of year	25,882.63
Deficit at close of year	<u>\$32,646.63</u>

OPERATING REVENUES.

Revenues from transportation:	
Passenger revenue	\$28,132.30
Revenue from operations other than transportation:	
Station and car privileges.....	\$450.00
Rents of equipment.....	1,026.57
Total revenue from operations other than transportation	1,476.57
Total operating revenues.....	\$29,608.87

OPERATING EXPENSES.

Way and structures:	
Maintenance of roadway and track.....	\$3,291.12
Other maintenance of way.....	47.93
Poles and fixtures.....	17.21
Distribution system	390.55
Miscellaneous electric line expenses.....	85.99
Total—way and structures.....	\$3,832.80
Equipment:	
Superintendence of equipment.....	\$265.55
Maintenance of cars and locomotives.....	1,882.16
Maintenance of electric equipment of cars and locomotives	1,204.39
Total—equipment	\$3,352.10
Conducting transportation:	
Superintendence of transportation.....	\$471.55
Group I—power—	
Power purchased	10,290.32
Group II—operation of cars—	
Passenger conductors, motormen, and trainmen.....	3,920.91
Miscellaneous car-service employees and expenses.....	299.55
Carhouse employees and expenses.....	400.77
Loss and damage.....	10.00
Total—conducting transportation	\$15,393.10
General and miscellaneous:	
Salaries and expenses of general officers and general office clerks	\$2,726.40
General office supplies and expenses.....	505.74
Miscellaneous general expenses.....	17.50
Injuries and damages.....	1,125.27
Insurance	380.95
Stationery and printing.....	7.50
Rent of tracks and terminals.....	733.42
Removal of snow and ice.....	78.23
Total—general and miscellaneous.....	\$5,575.01
Recapitulation of expenses:	
Way and structures.....	\$3,832.80
Equipment	3,352.10
Conducting transportation	15,393.10
General and miscellaneous.....	5,575.01
Total operating expenses.....	\$28,153.01
Ratio of operating expenses to operating revenues, 95.21%	

COMPARATIVE GENERAL BALANCE SHEET.

June 30, 1913.	Assets.	June 30, 1914.
\$262,598.31	Cost of road	\$262,970.98
48,366.38	Cost of equipment	48,366.38
1,062.58	Cash and current assets.....	426.35
	Other assets:	
25,882.63	Deficit	32,646.63
<u>\$337,909.90</u>	Total	<u>\$344,410.34</u>

Liabilities.

\$175,000.00	Capital stock, common.....	\$175,000.00
125,000.00	Funded debt	125,000.00
33,966.70	Current liabilities	39,649.63
	Accrued liabilities:	
2,350.00	Taxes accrued and not yet due.....	2,350.00
520.83	Interest on funded debt accrued and not yet due	520.83
1,072.37	Accrued accident insurance.....	1,889.88
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\$337,909.90	Total	\$344,410.34

MILEAGE, TRAFFIC, AND MISCELLANEOUS STATISTICS.

Passenger car mileage	114,812
Passenger car hours	7,491
Total revenue passengers carried.....	562,646
Passenger revenue	\$28,132.30
Average fare, revenue passengers .....	.05000
Average fare, all passengers .....	.05000
Total revenue from transportation.....	28,132.30
Revenue from transportation per car mile.....	.24503
Revenue from transportation per car hour	3.75547
Total revenue from operations other than transportation....	1,476.57
Revenue from operations other than transportation per car mile .....	.01286
Revenue from operations other than transportation per car hour .....	.19711
Total operating revenues.....	29,608.87
Operating revenues per car mile .....	.25789
Operating revenues per car hour	3.95259
Total operating expenses.....	28,153.01
Operating expenses per car mile .....	.24520
Operating expenses per car hour	3.75824

EMPLOYEES.

General administration:

General officers, 4; general office clerks, 1.

Transportation:

Superintendents, 1; total, 6.

Aggregate salaries and wages paid, \$11,275.54.

MANCHESTER & NASHUA STREET RAILWAY.

HISTORY.

Date of organization: March 7, 1903, as Goff's Falls, Litchfield & Hudson Street Railway. Name changed February 27, 1907, to Manchester & Nashua Street Railway.

Organized under the laws of the State of New Hampshire.

PRINCIPAL OFFICERS.

President, Charles M. Floyd, Vice-President, W. Parker Straw, Manchester, N. H.; Treasurer, Nathan Anthony, Boston, Mass.; General Manager, J. Brodie Smith, Manchester, N. H.; Secretary, George W. Clyde, Boston, Mass.

DIRECTORS.

Charles M. Floyd, J. Brodie Smith, W. Parker Straw, Manchester, N. H.; Stillman F. Kelley, Nathan Anthony, Boston, Mass.

FACTS PERTAINING TO CONTROL.

Last meeting of stockholders for election of directors: September 12, 1913. Number of stockholders of record: 1. Each share of stock has one vote. No issue of securities has contingent voting rights or special privileges in the election of directors. Manchester Traction, Light & Power Company had sole direct control of respondent established by ownership of 100% of stock. No individual, association, or corporation, as trustee, controlled the respondent on June 30, 1914.

MILEAGE OF ROAD OPERATED.

Line owned and operated:	
Main track, Goff's Falls to Hudson Bridge.....	12.378 miles
Second track .....	.654
Sidings and turnouts.....	1.303
Total mileage operated (all tracks).....	14.335 miles

CAPITALIZATION.

Capital stock, authorized and outstanding:	
Common, 2,400 shares, par value, \$100 each.....	\$240,000.00
Dividends, declared and paid during year, none.	
Funded debt, authorized and outstanding:	
Mortgage bonds, 1907-1927, on entire line—par value authorized, \$300,000, par value outstanding.....	\$200,000.00
Interest accrued and paid during year, 5%.....	10,000.00
Capital stock per mile of line, 12.378 miles.....	19,389.24
Funded debt per mile of line, 12.378 miles.....	16,157.70
Total capitalization per mile of line.....	\$35,546.94

CURRENT ASSETS AND LIABILITIES.

Cash and current assets:	
Cash	\$3,062.44
Accounts receivable	257.37
Prepaid accounts	4,772.68
Total	\$8,092.49
Current liabilities:	
Accounts payable	2,174.44
Total—current liabilities	\$2,174.44
Balance—cash assets	5,918.05
Total	\$8,092.49

EXPENDITURES FOR ROAD.

Account.	Total cost to June 30, 1913.	Additions during year.	Total cost to June 30, 1914.
Road:			
Engineering and superintendence	\$7,551.00	\$7,551.00
Right of way.....	27,025.88	27,025.88
Grading	279,493.98	214.20	279,708.18
Ballast			
Ties			
Rails, rail fastenings, and joints			
Special work			
Underground construction..			
Paving			
Track laying and surfacing..			
Roadway tools			
Tunnels			
Elevated structures and foundations			
Bridges, trestles, and culverts			
Crossings, fences, cattle guards, and signs.....			

Account.	Total cost to June 30, 1913.	Additions during year.	Total cost to June 30, 1914.
Interlocking and other signal apparatus	\$56,350.33	.....	\$56,350.33
Telegraph and telephone lines			
Poles and fixtures.....			
Underground conduits.....			
Transmission system.....			
Distribution system.....			
Dams, canals, and pipe lines	4,501.83	.....	4,501.83
Substation buildings	15,888.00	.....	15,888.00
Substation equipment			
Total	\$390,811.02	\$214.20	\$391,025.22
Equipment:			
Cars	\$20,292.83	.....	\$20,292.83
Electric equipment of cars..	17,151.03	.....	17,151.03
Total	\$37,443.86		\$37,443.86
General expenditures:			
Interest	\$8,300.17	.....	\$8,300.17
Miscellaneous	9,952.23	\$300.16	10,252.39
Total	\$18,252.40	\$300.16	\$18,552.56
Recapitulation:			
Road	\$390,811.02	\$214.20	\$391,025.22
Equipment	37,443.86	.....	37,443.86
General expenditures.....	18,252.40	300.16	18,552.56
Total	\$446,507.28	\$514.36	\$447,021.64
Cost of road per mile of line..	\$31,573.03	\$17.30	\$31,590.33
Cost of equipment per mile of line	3,025.03	.....	3,025.03
General expenditures per mile of line	1,474.58	24.25	1,498.83
Total per mile of line....	\$36,072.64	\$41.55	\$36,114.19

INCOME ACCOUNT.

Operating revenues	\$46,579.02
Operating expenses	32,648.48
Gross income less operating expenses.....	\$13,930.54
Deductions from income:	
Interest—	
On funded debt	\$10,000.00
On floating debt	147.29
Total deductions	10,147.29
Net income	\$3,783.25
Surplus at beginning of year.....	6,253.82
Surplus at close of year.....	\$10,037.07

OPERATING REVENUES.

Revenues from transportation:	
Passenger revenue	\$43,912.95
Freight revenue	48.28
Total revenue from transportation.....	\$43,961.23

Revenue from operations other than transportation:

Station and car privileges.....	\$450.00
Rents of tracks and terminals	733.42
Rents of equipment	1,434.37

Total revenue from operations other than transportation \$2,617.79

Total operating revenues..... \$46,579.02

OPERATING EXPENSES.

Way and structures:

Maintenance of roadway and track.....	\$4,781.56
Other maintenance of way.....	150.21
Poles and fixtures.....	99.90
Distribution system	354.21
Miscellaneous electric line expenses.....	85.99
Buildings and structures.....	2.15

Total—way and structures..... \$5,474.02

Equipment:

Superintendence of equipment.....	\$263.40
Maintenance of cars and locomotives	1,694.89
Maintenance of electric equipment of cars and locomotives	1,261.83

Total—equipment

\$3,220.12

Conducting transportation:

Superintendence of transportation.....	\$471.55
Group I—power—	
Power purchased	13,435.69
Group II—operation of cars—	
Passenger conductors, motormen and trainmen.....	3,670.12
Miscellaneous car-service employees and expenses.....	400.04
Carhouse employees and expenses.....	384.84
Loss and damage.....	57.50
Other transportation expenses.....	.36

Total—conducting transportation

\$18,420.10

General and miscellaneous:

Salaries and expenses of general officers and general office clerks	\$2,726.10
General office supplies and expenses.....	501.74
Law expenses	50.00
Miscellaneous general expenses.....	125.00
Injuries and damages.....	1,756.52
Insurance	299.70
Stationery and printing.....	7.50
Removal of snow and ice.....	67.68

Total—general and miscellaneous..... \$5,534.24

Recapitulation of expenses:

Way and structures.....	\$5,474.02
Equipment	3,220.12
Conducting transportation	18,420.10
General and miscellaneous.....	5,534.24

Total operating expenses..... \$32,648.48

Ratio of operating expenses to operating revenues, 70.09%

COMPARATIVE GENERAL BALANCE SHEET.

Assets.		
June 30, 1913.		June 30, 1914.
\$390,811.02	Cost of road	\$391,025.22
37,443.86	Cost of equipment	37,443.86
18,252.40	General expenditures	18,552.56
12,270.00	Cash and current assets.....	8,092.49
<u>\$458,777.28</u>	Total	<u>\$455,114.13</u>

Liabilities.

\$240,000.00	Capital stock, common.....	\$240,000.00
200,000.00	Funded debt	200,000.00
9,590.13	Current liabilities	2,174.44
	Accrued liabilities:	
2,100.00	Taxes accrued and not yet due.....	2,069.29
833.33	Interest on funded debt accrued and not yet due.....	833.33
6,253.82	Surplus	10,037.07
<hr/>		<hr/>
\$458,777.28	Total	\$455,114.13

MILEAGE, TRAFFIC, AND MISCELLANEOUS STATISTICS.

Passenger car mileage	172,034
Passenger car hours	9,353
Regular fare passengers carried.....	878,259
Passenger revenue	\$43,912.95
Average fare, revenue passengers .....	.05000
Average fare, all passengers .....	.05000
Total revenue from transportation.....	43,961.23
Revenue from transportation per car mile .....	.25554
Revenue from transportation per car hour	4.70023
Total revenue from operations other than transportation...	2,617.79
Revenue from operations other than transportation per car mile .....	.01522
Revenue from operations other than transportation per car hour .....	.27989
Total operating revenues.....	46,579.02
Operating revenues per car mile.....	.27075
Operating revenues per car hour.....	4.98012
Total operating expenses.....	32,648.48
Operating expenses per car mile .....	.18978
Operating expenses per car hour	3.49070

EMPLOYEES.

General administration:	
General officers, 4; office clerk 1; total.....	5
Maintenance:	
Other employees	18
Transportation:	
Superintendent and 8 other employees.....	9
<hr/>	<hr/>
Total employees	32

DESCRIPTION OF EQUIPMENT.

Cars with electric equipment:
Closed passenger cars, 6; work car and snowplow, 2; total, 8.

ACCIDENTS TO PERSONS.

None.

MANCHESTER TRACTION, LIGHT AND POWER COMPANY.

This company operates three street railways: Manchester Street Railway, Manchester & Derry Street Railway, and Manchester & Nashua Street Railway.

For report see electric utilities.

MASSACHUSETTS NORTHEASTERN STREET RAILWAY COMPANY.

HISTORY.

Organized June 26, 1912. Incorporated under chapter 113, Public Statutes, and Massachusetts General Laws. Consolidation under chapter 463, part III, sections 52, 53 and 54, Acts and Resolves of 1912 Massachusetts. Also under Chapter 94 of the Acts of the General Court of New Hampshire, 1911. The consolidated company consists of the following constituent companies chartered as indicated:

1. Haverhill & Amesbury St. Ry. Co., May 9, 1892—
under chapter 217 Acts of 1892 with amendments contained in chapters 309 and 316 Acts of 1901 Massachusetts.
2. Haverhill & Plaistow St. Ry. Co., June 5, 1901—
under chapter 385 Acts of 1901 Massachusetts.
3. Lawrence & Methuen St. Ry. Co., June 1, 1899—
Massachusetts General Laws.
4. Citizens Electric St. Ry. Co., May 4, 1899—
under chapter 304 Acts of 1899 with amendments contained in chapter 309 and 316 Acts of 1901 Massachusetts.
5. Amesbury & Hampton St. Ry. Co., Jan. 27, 1899—
Massachusetts General Laws.
6. Lowell & Pelham St. Ry. Co., Jan. 20, 1902—
Massachusetts General Laws.
7. Haverhill, Plaistow & Newton St. Ry. Co., March 26, 1901—
under chapter 228 Acts of 1901, New Hampshire.
8. Hudson, Pelham & Salem St. Ry. Co., July 19, 1907—
under chapter 52 Session Laws 1895, and New Hampshire General Laws.
9. Seabrook & Hampton Beach St. Ry. Co., March 23, 1901—
under chapter 262 Acts of 1901, New Hampshire.

Date and authority for each consolidation: consolidated all above under date of April 2, 1913. Authority for Nos. 1, 2, 3, and 8, Sept. 12, 1912, Orders 8919, 8920, 8921, 8922, Mass. R. R. Commissioners. Nos. 4, 7, and 9, Dec. 3, 1912, Orders 9042, 9043, 9044, Mass. R. R. Commissioners. Nos. 5 and 6, March 11, 1913, Orders 9246, 9247, Mass. R. R. Commissioners. Nos. 7, 8, and 9, Feb. 14, 1913, Public Service Commission of New Hampshire.

Originally the Haverhill & Southern New Hampshire St. Ry. Co. Organized Sept. 18, 1899, under chapter 113 Public Statutes, and Massachusetts General Laws. Name changed to Massachusetts Northeastern St. Ry. Co., by authority of Board of R. R. Commissioners of Massachusetts, dated June 26, 1912.

PRINCIPAL OFFICERS.

President, David A. Belden; Vice-President, Franklin Woodman; Treasurer and Auditor, Frederick E. Webster, Haverhill, Mass.

DIRECTORS.

David A. Belden, Charles F. Ayer, Boston, Mass.; Alfred D. Foster, Milton, Mass.; Otto T. Bannard, New York City; F. W. Stearns, Newton, Mass.

FACTS PERTAINING TO CONTROL.

Date of last meeting of stockholders for election of directors: February 10, 1914.

Books not closed.

Total number of stockholders of record: 6.

Each share of stock has one vote.

No issue of securities has contingent voting rights or special privileges in the election of directors.

No other corporation or corporations, transportation or other, controlled the respondent on June 30, 1913.

Individual, association or corporation as trustee, which controlled the respondent on June 30, 1914. New York Trust Company, New York, N. Y.

The name of the beneficiary or beneficiaries for whom the trust was maintained: New Hampshire Electric Railways.

ROAD OPERATED.

Line owned by respondent:

Massachusetts Northeastern St. Ry. Co.—	
Haverhill to Hampton Beach.....	24.75 miles
Haverhill to Salisbury Beach.....	20.72
Newburyport to Smithtown in Seabrook.....	5.18
Amesbury to Newburyport.....	5.24
Plum Island to Newburyport.....	5.08
Parker River to Newburyport.....	3.99
Additional lines in Newburyport.....	2.55
Haverhill to Hudson Bridge.....	24.88
Pelham to Dracut.....	6.22
Salem, N. H., to Lawrence.....	11.76
Haverhill Junction to Lawrence.....	7.58

117.95 miles

Line operated under trackage rights:

Exeter, Hampton & Amesbury St. Ry., near bridge to Hampton Beach.....	.55 miles	
Bay State St. Ry., on Broadway in Methuen	.22	
Bay State St. Ry., on Main St. in Haverhill	.05	
Bay State St. Ry., B. & M. Depot Loop in Haverhill .....	.46	
Bay State St. Ry., Hudson bridge to Nashua	1.19	
		2.47 miles
Total		120.42 miles

MILEAGE OF ROAD OPERATED.

	Line owned.	Line under trackage rights.	Total miles operated.
Massachusetts	77.31	.73	78.04
New Hampshire	40.64	1.74	42.38
Total mileage operated.....	117.95	2.47	120.42
Second track	1.43	....	1.43
Sidings and turnouts.....	6.32	.14	6.46
Total all tracks.....	125.70	2.61	128.31

CAPITALIZATION.

Capital stock, authorized, outstanding, not held by respondent:

Common, 15,000 shares, par value.....	\$1,500,000.00
Preferred, 6,650 shares, par value.....	665,000.00
Dividends declared during year, none.	

FUNDED DEBT.

Mortgage bonds.	Par value authorized.	Par value outstanding not held by respondent.	Rate %†	Interest accrued and paid during year.
H. & So. N. H., 1903-1923	\$85,000.00	\$80,000.00	5	\$4,000.00
No. 1. H. & A., 1892-1912	380,000.00	290,000.00	5	14,500.00
2. H. & P., 1901-1921	30,000.00	30,000.00	5	1,500.00
3. L. & M., 1903-1923	160,000.00	125,000.00	5	6,250.00
4. C. E., 1900-1920	230,000.00	230,000.00	5	11,500.00
5. A. & H., 1899-1919	100,000.00	100,000.00	5	5,000.00
6. L. & P., 1903-1923	40,000.00	40,000.00	5	2,000.00
7. H. P. & N., 1908-1928	145,000.00	145,000.00	5	7,250.00
8. H. P. & S., 1907-1927	200,000.00	200,000.00	5	10,000.00
9. S. & H. B., 1908-1928	45,000.00	45,000.00	5	2,250.00
Total mortgage bonds	\$1,415,000.00	\$1,285,000.00		\$64,250.00
Capital stock per mile of line				\$14,836.79
Funded debt per mile of line				10,894.45
Total, 117.95 miles				\$25,731.24

CURRENT ASSETS AND LIABILITIES.

Cash and current assets:	
Cash	\$17,344.59
Accounts receivable	22,900.57
Materials and supplies	34,941.22
Prepaid accounts	172.98
Total—cash and current assets	\$75,359.36
Balance—current liabilities	637,859.42
Total	\$713,218.78
Current liabilities:	
Loans and notes payable	\$680,000.00
Accounts payable	33,218.78
Total—current liabilities	\$713,218.78

SECURITY FOR FUNDED DEBT.

First mortgage bonds, 5%, 20-year, on all properties, franchises, rights and income.

	Road mortgaged. Termini.	Miles.	Mortgage per mile.
1. Haverhill & So. N. H....	Haverhill to State Line	7.84	\$10,204
2. Haverhill & Amesbury...	Haverhill to Salisbury Beach		
	Newburyport to Sea- brook, N. H.....	25.90	11,197
3. Haverhill & Plaistow....	Haverhill to Plaistow..	2.68	11,194
4. Lawrence & Methuen....	Lawrence to Haverhill		
	Lawrence to State Line	12.52	9,984
5. Citizens Electric.....	Amesbury to Newbury- port		
	Plum Island to New- buryport		
	Parker River to New- buryport		
	City Lines in Newbury- port	16.86	13,642

†Payable January 1 and July 1; except 5, June 1 and December 1; and 6, April 1 and October 1.

	Road mortgaged. Termini.	Miles	Mortgage per mile.
6. Amesbury & Hampton...	State Line to State Line, through Amesbury and Salisbury	8.34	\$11,990
7. Lowell & Pelham.....	through town of Dracut	3.17	12,618
8. Haverhill, Plaistow & Newton	State Line at Plaistow to State Line at New- ton	8.15	17,791
9. Hudson, Pelham & Salem.	State Line at Wilson's Corner to Hudson Bridge Pelham to Dracut Salem to Methuen.....	26.91	7,432
10. Seabrook & Hampton Beach	Seabrook to Hampton Beach	5.58	8,065
		<u>117.95</u>	<u>\$10,894</u>

EXPENDITURES FOR ROAD, EQUIPMENT, ETC.

Account.	Total cost to June 30, 1913.	Additions during year.	Deductions during year.	Total cost to June 30, 1914.
Road:				
Engineering and superintendence	\$105,155.59	.....	.....	\$105,155.59
Right of way....	42,809.16	.....	.....	42,809.16
Other land used in electric rail- way operations.	29,384.86	.....	.....	29,384.86
Grading	229,875.06	.....	.....	229,875.06
Ballast	80,909.10	.....	.....	80,909.10
Ties	224,357.80	.....	.....	224,357.80
Rails, rail fasten- ings and joints	521,820.73	.....	.....	521,820.73
Special work....	58,239.68	.....	.....	58,239.68
Paving	235,462.99	\$380.87	.....	235,843.86
Track laying and surfacing	192,402.79	.....	.....	192,402.79
Roadway tools...	11,693.02	.....	.....	11,693.02
Bridges, trestles, and culverts...	52,791.60	75,000.00	\$1,000	126,791.60
Crossings, fences, cattle guards, and signs.....	32,692.68	.....	.....	32,692.68
Interlocking and other signal ap- paratus	12,912.15	.....	.....	12,912.15
Telegraph and telephone lines	9,528.74	.....	.....	9,528.74
Poles and fixtures	91,588.34	.....	.....	91,588.34
Transmission sys- tem	28,545.24	.....	.....	28,545.24
Distribution sys- tem	310,217.20	.....	.....	310,217.20
Substation build- ings	72,074.93	.....	.....	72,074.93
General office buildings	4,745.80	.....	.....	4,745.80
Shops and car houses	90,285.38	1,700.00	.....	91,985.38
Stations, waiting rooms, and mis- cellaneous build- ings	5,633.82	.....	.....	5,633.82
Docks and wharves	3,000.00	.....	.....	3,000.00
Substation equip- ment	234,675.77	375.00	1,632	233,418.77
Shop equipment...	6,825.96	.....	.....	6,825.96
Park and resort property	9,740.75	153,281.23	.....	163,021.98
Total	<u>\$2,697,369.14</u>	<u>\$230,737.10</u>	<u>\$2,632</u>	<u>\$2,925,474.24</u>

Account.	Total cost to June 30, 1913.	Additions during year.	Deductions during year.	Total cost to June 30, 1914.
Equipment:				
Cars	\$306,612.79	\$2,408.84	.....	\$309,021.63
Electric equipment of cars	280,788.58	162.00	.....	280,950.58
Other rail equip- ment	54,801.91	366.83	.....	55,168.74
Miscellaneous equipment	15,470.75	.....	.....	15,470.75
Total	\$657,674.03	\$2,937.67		\$660,611.70
General expenditures:				
Interest	\$67,082.20	.....	.....	\$67,082.20
Injuries and dam- ages	1,335.62	.....	.....	1,335.62
Miscellaneous ...	1,170.01	\$690.99	.....	1,861.00
Total	\$69,587.83	\$690.99	.....	\$70,278.82
Recapitulation:				
Road	\$2,697,369.14	\$230,737.10	\$2,632	\$2,925,474.24
Equipment	657,674.03	2,937.67	.....	660,611.70
General expend- itures	69,587.83	690.99	.....	70,278.82
Total	\$3,424,631.00	\$234,365.76	\$2,632	\$3,656,364.76
Cost of road per mile of line	\$22,868.75	.....	.....	\$24,802.66
Cost of equipment per mile of line..	5,575.87	.....	.....	5,600.77
General expenditures per mile of line..	589.97	.....	.....	595.84
Total per mile of line (117.95)	\$29,034.59			\$30,999.28

INCOME ACCOUNT.

Operating revenues	\$699,109.77	
Operating expenses	539,071.85	
Net operating revenues		\$160,037.92
Miscellaneous income:		
Interest on deposits	\$810.36	
Other miscellaneous income	879.12	
		1,689.48
Gross income less operating expenses		\$161,727.40
Deductions from income:		
Taxes—		
On real and personal property	\$4,016.67	
On capital stock	9,655.06	
On earnings	10,051.00	
Miscellaneous	159.23	
	\$23,881.96	
Interest—		
On funded debt	64,250.00	
On floating debt	44,781.66	
	\$109,031.66	
Total deductions		132,913.62
Net income		\$28,813.78

Disposition of net income:		
Depreciation	\$100,000.00	
Sinking fund	1,581.62	
		<u>\$101,581.62</u>
Deficit for year.....		\$72,767.84
Surplus at beginning of year.....		3,856.01
		<u>\$68,911.83</u>
Total deficit		
Profit or loss adjustments during year:		
Credits—		
Adjustment old accounts.....	\$4,468.41	
Debits	124.28	
		<u>4,344.13</u>
Deficit at close of year.....		\$64,567.70

MISCELLANEOUS INCOME

Net earnings, park resorts.....	\$360.26
Town of Salisbury, gravel.....	518.86
	<u>\$879.12</u>

OPERATING REVENUES.

Revenue from transportation:	
Passenger revenue	\$685,222.97
Parlor, chair, and special car revenue.....	8,025.80
Mail revenue	1,369.92
Freight revenue	1,771.84
	<u>\$696,390.53</u>
Total revenue from transportation.....	
Revenue from operations other than transportation:	
Station and car privileges.....	\$1,821.88
Rents of tracks and terminals.....	476.90
Rents of buildings and other property.....	220.46
Power	200.00
	<u>\$2,719.24</u>
Total revenue from operations other than transportation	
Total operating revenues.....	\$699,109.77

OPERATING EXPENSES.

Way and structures:	
Superintendence of way and structures.....	\$3,968.21
Maintenance of roadway and track.....	56,619.03
Other maintenance of way.....	5,438.57
Poles and fixtures.....	3,315.56
Distribution system	15,043.01
Buildings and structures.....	1,783.34
	<u>\$86,167.72</u>
Total—way and structures.....	
Equipment:	
Superintendence of equipment.....	\$1,073.18
Substation equipment	1,521.68
Maintenance of cars and locomotives.....	27,840.72
Maintenance of electric equipment of cars and locomotives	19,903.10
Miscellaneous equipment expenses.....	2,402.20
	<u>\$52,740.88</u>
Total—equipment	
Traffic:	
Traffic expenses	\$5,599.85
Conducting transportation:	
Superintendence of transportation.....	\$20,466.47
Group I—power—	
Substation employees	10,105.74
Substation supplies and expenses.....	1,048.31
Power purchased	145,037.91

Group II—operation of cars—	
Passenger conductors, motormen, and trainmen.....	\$113,842.52
Freight and express conductors, motormen and trainmen.....	260.27
Miscellaneous car-service employees and expenses....	6,277.93
Station employees and expenses.....	1,602.32
Carhouse employees and expenses.....	16,285.88
Other transportation expenses.....	506.66
Total—conducting transportation	\$315,434.01
General and miscellaneous:	
Salaries and expenses of general officers and general office clerks	\$21,183.70
General office supplies and expenses.....	1,965.80
Law expenses	813.00
Miscellaneous general expenses.....	3,338.10
Injuries and damages.....	34,261.15
Insurance	5,829.56
Stationery and printing.....	2,074.60
Store expenses	1,794.50
Stable expenses	2,273.80
Rent of tracks and terminals.....	4,102.84
Rent of equipment.....	1,492.34
Total—general and miscellaneous.....	\$79,129.39
Recapitulation of expenses:	
Way and structures.....	\$86,167.72
Equipment	52,740.88
Traffic	5,599.85
Conducting transportation	315,434.01
General and miscellaneous.....	79,129.39
Total operating expenses.....	\$539,071.85
Ratio of operating expenses to revenues, 77.11%	

COMPARATIVE GENERAL BALANCE SHEET.

June 30, 1913.		Assets.	June 30, 1914.
\$2,697,369.14	Cost of road		\$2,925,474.24
657,674.03	Cost of equipment		660,611.70
69,587.83	General expenditures		70,278.82
12,508.67	Unfinished work in hand.....		
101,840.35	Reconstruction accounts undistributed...		
70,761.82	Cash and current assets.....		75,359.36
	Other assets:		
11,275.00	Sinking funds		12,856.62
.....	Deficit		64,567.70
\$3,621,016.84	Total		\$3,809,148.44
		Liabilities.	
.....	Capital stock preferred.....		\$250,000.00
\$1,455,000.00	Capital stock, common.....		1,500,000.00
1,285,000.00	Funded debt		1,285,000.00
794,170.06	Current liabilities		713,218.78
	Accrued liabilities:		
10,313.17	Taxes accrued and not yet due.....		5,865.00
2,208.33	Interest on funded debt accrued and not yet due.....		2,208.33
	Reserves—		
14,684.44	Accident	}	52,856.33
44,509.83	Depreciation		
11,275.00	Sinking fund.....		
3,856.01	Surplus		
\$3,621,016.84	Total		\$3,809,148.44

IMPORTANT CHANGES DURING THE YEAR.

All new stocks issued: April 10, 1914. Issued 450 shares of common stock, and 2,500 shares of preferred stock.
 Authority: Orders of Public Service Commission of New Hampshire, dated January 8 and 23, 1914, and order of Public Service Commission of Massachusetts, dated December 31, 1913.

MILEAGE, TRAFFIC, AND MISCELLANEOUS STATISTICS.

Passenger car mileage.....	2,540,400
Freight, mail, and express car mileage.....	5,000
Total car mileage.....	2,545,400
Passenger car hours.....	220,149
Freight, mail and express car hours.....	770
Total car hours.....	220,919
Regular fare passengers carried.....	14,142,976
Free transfer passengers carried (estimated).....	276,212
Total passengers carried.....	14,419,188
Passenger revenue	685,222.97
Average fare, revenue passengers .....	.04845
Average fare, all passengers.....	.04752
Total revenue from transportation.....	696,390.53
Revenue from transportation per car mile.....	.27359
Revenue from transportation per car hour	3.15224
Total revenue from operations other than transportation....	2,719.24
Revenue from operations other than transportation per car mile .....	.00107
Revenue from operations other than transportation per car hour .....	.01231
Total operating revenues.....	699,109.77
Operating revenues per car mile .....	.27466
Operating revenues per car hour	3.16455
Total operating expenses.....	539,071.85
Operating expenses per car mile .....	.21178
Operating expenses per car hour	2.44013

EMPLOYEES.

General administration:	
General officers, 3; general office clerks, 13; total.....	16
Maintenance:	
Superintendents, 4; other employees, 294; total.....	298
Transportation:	
Superintendents, 2; other employees, 233; total.....	235
Total	549

DESCRIPTION OF EQUIPMENT.

	With electric equipment.	Without electric equipment.	Total.
Passenger cars, closed	19	29	48
Passenger cars, open	84	2	86
Total	103	31	134
Express cars	2	..	2
Work cars	11	6	17
Snowplows	2	15	17
Total cars of all classes.....	118	52	170

ACCIDENTS TO PERSONS.

	Killed.	Injured.	Total.
Passengers	7	7
Employees	1	1
Total	8	8

NASHUA STREET RAILWAY.

HISTORY.

Organized August 14, 1885, under laws of State of New Hampshire, special act of legislature—approved August 14, 1885.

Not a consolidated or a reorganized company.

The road of this company is operated by the Bay State Street Railway Company.

PRINCIPAL OFFICERS.

President, John A. Fisher, Nashua, N. H.; Vice-President, Patrick F. Sullivan, Boston, Mass.; Secretary, Jason E. Tolles, Nashua, N. H.; Treasurer, Joseph H. Goodspeed, Boston, Mass.; General Counsel, George B. French, Nashua, N. H.; Auditor, Herbert H. Read, General Manager, Robert S. Goff, Boston, Mass.; General Superintendent, Thomas Lees, Lowell, Mass.

DIRECTORS.

John A. Fisher, Nashua, N. H.; Patrick F. Sullivan, Lowell, Mass.; Joseph H. Goodspeed, Boston, Mass.; George A. Fernald, Winchester, Mass.; Jason E. Tolles, Nashua, N. H.

FACTS PERTAINING TO CONTROL.

Date of last meeting of stockholders for election of directors: October 13, 1913.

Date of last closing of stock books before end of year for which this report is made. Not closed.

Total number of stockholders of record: 161.

Each share of stock has one vote.

No issue of securities has contingent voting rights or special privileges in the election of directors.

No other corporation or corporations, transportation or other, controlled the respondent on June 30, 1914.

No individual, association, or corporation, as trustee, controlled the respondent on June 30, 1914.

Road is leased to Bay State Street Railway Company, July 1, 1900-July 1, 1999, 6% annually on capital stock, interest on bonds, all taxes and assessments, and \$500 annually for maintenance of organization

MILEAGE OF ROAD OPERATED.

Main line, in Nashua and to Massachusetts state line..... 14.61 miles

CAPITALIZATION.

Capital stock, authorized, outstanding not held by respondent:

Common, 3,250 shares, par value..... \$325,000.00

Dividends, declared, and paid during year, 6%..... 195,000.00

Funded debt, authorized, outstanding, not held by respondent:

First mortgage gold bonds, 1901-1931, on entire property, par value 150,000.00

Interest accrued and paid during year..... 6,000.00

NASHUA STREET RAILWAY.

253

Capital stock per mile of line.....	\$22,245.04
Funded debt per mile of line.....	10,266.94
Total capitalization per mile of line.....	<u>\$32,511.98</u>

EXPENDITURES FOR ROAD, EQUIPMENT, ETC.

Account.	Total cost to June 30, 1913.	Additions during year.	Total cost to June 30, 1914.
Road	\$452,145.98	\$197.41	\$452,343.39
Equipment	61,932.61	.....	61,932.61
General expenditures.....	490.62	.....	490.62
Total	<u>\$514,569.21</u>	<u>\$197.41</u>	<u>\$514,766.62</u>
Cost of road per mile of line	\$30,947.71	.....	\$30,961.22
Cost of equipment per mile of line	4,239.05	.....	4,239.05
General expenditures per mile of line.....	33.58	.....	33.58
Total per mile of line..	<u>\$35,220.34</u>		<u>\$35,233.85</u>

INCOME ACCOUNT.

Gross income from lease of road.....	\$33,498.03
Salaries and maintenance of organization.....	500.00
Net income from lease of road.....	<u>\$33,998.03</u>
Deductions from income:	
Taxes—	
On real and personal property.....	\$135.63
On capital stock	7,022.40
Miscellaneous—Federal Income Tax....	340.00
	<u>\$7,498.03</u>
Interest on funded debt.....	6,000.00
Total deductions from income.....	<u>13,498.03</u>
Net corporate income.....	\$19,500.00
Dividends on common stock.....	19,500.00
Surplus for year.....	.....
Surplus at beginning of year.....	<u>\$12,625.86</u>
Surplus at close of year.....	<u>\$12,625.86</u>

OPERATING REVENUES.

(See Note 1.)

Revenue from transportation:	
Passenger revenue	\$99,565.93
Parlor, chair, and special car revenue.....	61.50
Express revenue	11.68
Total revenue from transportation.....	<u>\$99,639.11</u>
Revenue from operations other than transportation:	
Station and car privileges	\$378.30
Rents of tracks and terminals.....	2,925.40
Rents of buildings and other property.....	142.70
Total revenue from operations other than transportation	<u>\$3,446.40</u>
Total operating revenues.....	<u>\$103,085.51</u>

NOTE 1. The revenues here reported consist of the revenues received by the lessee company from the operation of the lines of the Nashua Street Railway.

OPERATING EXPENSES.

(See Note 2.)

Way and structures:	
Superintendence of way and structures.....	\$1,068.15*
Maintenance of way	11,528.44
Maintenance of electric lines	2,197.00
Buildings and structures.....	256.13
Total—way and structures.....	\$15,049.72
Equipment:	
Superintendence of equipment.....	\$503.18*
Maintenance of power equipment	22.20
Maintenance of cars and locomotives.....	2,522.84
Maintenance of electric equipment of cars and locomotives	2,664.73
Miscellaneous equipment expenses.....	83.72
Total—equipment	\$5,796.67
Traffic:	
Traffic expenses	\$526.03**
Conducting transportation:	
Superintendence of transportation.....	\$1,739.06*
Group I—power—	
Substation employees	2,200.03
Power purchased	11,723.23*
Group II—operation of cars—	
Conductors, motormen, and trainmen.....	28,277.39
Miscellaneous transportation expenses.....	3,360.63
Total—conducting transportation	\$47,300.34
General and miscellaneous:	
General expenses	\$4,857.60*
Injuries and damages.....	4,981.37
Insurance	1,497.64
Stationery and printing.....	432.56*
Store and stable expenses.....	570.53**
Rent of equipment.....	375.26
Total—general and miscellaneous.....	\$12,694.96
Recapitulation of expenses:	
Way and structures.....	\$15,049.72
Equipment	5,796.67
Traffic	526.03
Conducting transportation	47,300.34
General and miscellaneous.....	12,694.96
Total operating expenses.....	\$81,367.72
Ratio of operating expenses to operating revenues, 78.93%	

COMPARATIVE GENERAL BALANCE SHEET.

		<i>Assets.</i>	
June 30, 1913.			June 30, 1914.
\$452,145.98	Cost of road		\$452,343.39
61,932.61	Cost of equipment		61,932.61
490.62	General expenditures		490.62
<u>\$514,569.21</u>	Total		<u>\$514,766.62</u>

*Estimated.

**Partly estimated.

NOTE 2. No expenses of operating the lines of the Nashua Street Railway are paid by that company. The foregoing statement is compiled at the request of the Public Service Commission and is made up of such part of the expenses of the lessee as can be segregated, as applying to the lines of the Nashua Street Railway, together with a proportion (based on car miles run) of certain other expenses incurred by the lessee which cannot be so segregated.

Liabilities.

\$325,000.00	Capital stock, common.....	\$325,000.00
150,000.00	Funded debt	150,000.00
	Accrued liabilities:	
10,002.76	Bay State St. Ry. Co. (lease account)	10,002.76
16,819.59	Bay State St. Ry. Co. (property ac-	17,017.00
121.00	account)	121.00
12,625.86	Premium on capital stock.....	12,625.86
	Surplus	
<hr/>		<hr/>
\$514,569.21	Total	\$514,766.62

MILEAGE, TRAFFIC, AND MISCELLANEOUS STATISTICS.

Passenger car mileage	437,659
Passenger car hours	52,059
Regular fare passengers carried.....	2,000,015
Free transfer passengers carried.....	180,309
<hr/>	<hr/>
Total passengers carried.....	2,180,324
Passenger revenue	\$99,565.93
Average fare, revenue passengers .....	.04978
Average fare, all passengers .....	.04567
Total revenue from transportation...	99,639.11
Revenue from transportation per car mile .....	.22766
Revenue from transportation per car hour	1.91396
Total revenue from operations other than transportation...	3,446.40
Revenue from operations other than transportation per car	
mile .....	.00787
Revenue from operations other than transportation per car	
hour .....	.06620
Total operating revenues.....	103,085.51
Operating revenues per car mile .....	.23554
Operating revenues per car hour	1.98016
Total operating expenses.....	81,367.72
Operating expenses per car mile .....	.18612
Operating expenses per car hour	1.56299

EMPLOYEES.

General administration:	
General office clerks.....	2
Maintenance:	
No superintendent; other employees.....	10
Transportation:	
Superintendent and other employees.....	49
<hr/>	<hr/>
Total	61
Aggregate salaries and wages paid.....	\$41,586.76

DESCRIPTION OF EQUIPMENT.

	With electric equipment.	Without electric equipment.	Total number.
Closed passenger cars.....	11	2	13
Open passenger cars.....	13	..	13
<hr/>	<hr/>	<hr/>	<hr/>
Total passenger cars.....	24	2	26
Work cars	1	..	1
Snowplows	4	..	4
<hr/>	<hr/>	<hr/>	<hr/>
Total cars of all classes.....	29	2	31

ACCIDENTS TO PERSONS.

Passengers, injured	2
Employees	1
Total	3

BOSTON & MAINE RAILROAD.

(Owning and Operating the PORTSMOUTH ELECTRIC RAILWAY.)

For history, principal officers, directors, and facts pertaining to control, see Part I, reports of steam railroads, Boston & Maine Railroad.

MILEAGE OF ROAD OPERATED.

Line.	Line owned.	Line held under contract.	Total line operated.
Main line, Portsmouth to North Hampton	18.10	3.41	21.51
Sidings and turnouts	1.09	.09	1.18
Total (all tracks)	19.19	3.50	22.69
All in New Hampshire.			

CONDITION OF OPERATION—GREENLAND EXTENSION.

On October 8, 1912, an agreement was made with the Citizens Railway Material Company for the operation of an electric street railway extending from Portsmouth Plains to Greenland Parade, a distance of 3.41 miles, for the term of three years from that date. This line was a portion of the former Portsmouth & Exeter Street Railway and was partially dismantled. The Boston and Maine Railroad agreed to restore the dismantled portion and to assume \$1,000 towards the expense thereof in lieu of rent; any cost in excess of that amount to be paid by the Citizens Railway Materials Company. The Boston and Maine further agreed to maintain the property during said term, and in consideration of the foregoing conditions it receives for its own use the entire receipts. The road was opened December 23, 1912, and is operated as the Greenland Extension of the Portsmouth Electric Branch.

EXPENDITURES FOR ROAD, EQUIPMENT, ETC.

Account.	Total cost to June 30, 1913.	Deductions during year.	Total cost to June 30, 1914.
Road	\$430,576.58	\$312.22	\$430,264.36
Equipment	60,122.98	.....	60,122.98
Total	\$490,699.56	\$312.22	\$490,387.34
Cost of road per mile of line..	23,788.76	.....	23,771.51
Cost of equipment per mile of line	3,321.71	.....	3,321.71
Total per mile of line....	\$27,110.47		\$27,093.22

INCOME ACCOUNT.

Operating revenues	\$72,037.93
Operating expenses	66,714.66
Surplus for year	\$5,323.27
Proportionate part of additions and betterments made by lessee	333.38
Surplus at close of year	\$4,989.89

OPERATING REVENUES.

Revenue from transportation:	
Passenger revenue	\$71,313.83
Mail revenue	284.84
Total revenue from transportation.....	<u>\$71,598.67</u>
Revenue from operations other than transportation:	
Station and car privileges.....	\$389.26
Power	50.00
Total revenue from operations other than transportation	<u>439.26</u>
Total operating revenues.....	<u>\$72,037.93</u>

OPERATING EXPENSES.

Way and structures:	
Superintendence of way and structures.....	\$227.94
Maintenance of way	12,494.24
Maintenance of electric lines	2,324.27
Buildings and structures.....	1,004.61
Total—way and structures.....	<u>\$16,051.06</u>
Equipment:	
Superintendence of equipment.....	\$120.00
Maintenance of power equipment	805.11
Maintenance of cars and locomotives	2,644.00
Maintenance of electric equipment of cars and locomotives	2,236.95
Miscellaneous equipment expenses.....	146.18
Total—equipment	<u>\$5,952.24</u>
Traffic:	
Traffic expenses	\$89.50
Conducting transportation:	
Superintendence of transportation.....	\$2,528.70
Group I—power—	
Power-plant employees	5,189.06
Fuel for power.....	9,180.70
Other power supplies and expenses.....	1,447.28
Group II—operations of cars—	
Conductors, motormen, and trainmen.....	21,509.47
Miscellaneous transportation expenses.....	1,699.61
Total—conducting transportation	<u>\$41,554.82</u>
General and miscellaneous:	
General expenses	\$481.23
Injuries and damages.....	1,377.30
Insurance	774.35
Stationery and printing.....	100.80
Rents of tracks and terminals.....	333.36
Total—general and miscellaneous.....	<u>\$3,067.04</u>
Recapitulation of expenses:	
Way and structures.....	\$16,051.06
Equipment	5,952.24
Traffic	89.50
Conducting transportation	41,554.82
General and miscellaneous.....	3,067.04
Total operating expenses.....	<u>\$66,714.66</u>
Ratio of operating expenses to operating revenues, 90.26 per cent.	

MILEAGE, TRAFFIC, AND MISCELLANEOUS STATISTICS.

Passenger car mileage	373,026
Passenger car hours	51,421
Regular fare passengers carried.....	1,434,216
Free transfer passengers carried.....	95,558
Total passengers carried.....	1,529,774
Passenger revenue	\$71,313.83
Average fare, revenue passengers .....	.04972
Average fare, all passengers .....	.04661
Total revenue from transportation.....	71,598.67
Revenue from transportation per car mile.....	.19194
Revenue from transportation per car hour	1.39240
Total revenue from operation other than transportation....	43,926.00
Revenue from operations other than transportation per car mile .....	.00117
Revenue from operations other than transportation per car hour .....	.08074
Total operating revenues.....	72,037.93
Operating revenues per car mile .....	.19311
Operating revenues per car hour	1.40094
Total operating expenses.....	66,714.66
Operating expenses per car mile.....	.17884
Operating expenses per car hour	1.29742

EMPLOYEES.

General administration:	
General office clerks.....	1
Maintenance:	
Superintendent and other employees.....	40
Transportation:	
Other employees	40
Total	81
Aggregate salaries and wages paid.....	\$42,528.01

DESCRIPTION OF EQUIPMENT.

Passenger cars, electric:	
Closed, 10; open, 11; total.....	21
Work cars, electric, 1; non-electric, 1; total.....	2
Snowplow, electric	1
Total cars of all classes.....	24

ACCIDENTS TO PERSONS.

Employees injured, 2

SPRINGFIELD ELECTRIC RAILWAY COMPANY OF NEW HAMPSHIRE.

HISTORY.

Organized August 20, 1897, under laws of the State of New Hampshire.

PRINCIPAL OFFICERS.

President, Nathaniel G. Brooks; Secretary and Treasurer, Frank W. Hamlin, Charlestown, N. H.; Auditor, A. J. Crosby, Springfield, Vt.

DIRECTORS.

Nathaniel G. Brooks, Frank W. Hamlin, James A. Hunt, Charlestown, N. H.; Marcus A. Coolidge, Fitchburg, Mass.; Edward C. Crosby, Brattleboro, Vt.

FACTS PERTAINING TO CONTROL.

Date of last meeting of stockholders for election of directors: June 14, 1913.
 Total number of stockholders of record: 9.
 Each share of stock has one vote.
 No issue of securities has contingent voting rights or special privileges in the election of directors.
 Under sole direct control of Springfield Electric Railway Company of Vermont.
 Lease, term 99 years from October 1, 1897; annual rental, \$1.00.
 No individual, association, or corporation, as trustee, controlled the respondent on June 30, 1913.

MILEAGE OF ROAD OPERATED.

Line owned:	
Main line, Charlestown to Cheshire Bridge.....	2.250 miles
Second track .....	.336
Sidings and turnouts.....	.282
<hr/>	
Total mileage operated (all tracks).....	2.868 miles

CAPITAL STOCK.

Common, authorized and outstanding:	
120 shares, par value.....	\$12,000.00
Dividends declared during year.....	5,333.33
Capital stock per mile of line, 2.25 miles.....	

INCOME ACCOUNT.

Gross income from lease of road.....	\$1.00
Deductions:	
Paid to clerk for postage and incidental expenses.....	1.00
<hr/>	
Net income	

GENERAL BALANCE SHEET.

Assets.

Cost of railway.....	\$12,000.00
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Liabilities.

Capital stock, common.....	\$12,000.00
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SPRINGFIELD ELECTRIC RAILWAY COMPANY OF VERMONT.

HISTORY.

Date of organization: 1896.

PRINCIPAL OFFICERS.

President, Edward C. Crosby; Vice-President, M. A. Coolidge; Secretary, A. J. Crosby; Treasurer, M. A. Coolidge; General Counsel and Auditor, H. H. Blanchard; General Manager, Edward C. Crosby, Springfield, Vt.

DIRECTORS.

Edward C. Crosby, Brattleboro, Vt.; M. A. Coolidge, Fitchburg, Mass.; W. W. Brown, A. J. Crosby, H. H. Blanchard, Springfield, Vt.

FACTS PERTAINING TO CONTROL.

Date of last meeting of stockholders for election of directors: July 14, 1914.

Date of last closing of stock books before end of year for which this report is made: 1 week.

Total number of stockholders of record, 8.

Each share of stock has one vote.

No issue of securities has special privileges in the election of directors.

No individual, association, or corporation, as trustee, controlled the respondent on June 30, 1914.

ROAD OPERATED.

Line owned:

Main line, from Springfield, Vt., to Cheshire Bridge, N. H. 4.25 miles

Line operated under lease:

Main line from Cheshire Bridge to Charlestown, N. H... 2.25

1897-1997, annual rental \$1.00.

MILEAGE OF ROAD OPERATED.

	Line owned.	Line under lease.	Total mileage operated.
Main line, miles.....	4.25	2.25	6.5
Second track, miles.....	.329	.336	.665
Sidings and turnouts, miles.....	1.191	.282	1.473
Total	5.770	2.868	8.638

CAPITALIZATION.

Capital stock, authorized, outstanding, not held by respondent:

Common, 750 shares, par value..... \$75,000.00

Preferred, authorized, 1,250 shares, outstanding not held,
188 shares, par value..... 18,800.00

Dividends declared and paid during year:

Common, 4%, preferred 6%, total..... 4,118.95

Funded debt, authorized and outstanding:

First mortgage bonds, 1897-1917, on all property par value 100,000.00

Interest accrued and paid during year, 5%..... 5,000.00

Plain bonds, debentures and notes, par value..... 90,181.02

Interest accrued and paid during year..... 5,321.81

Capital stock per mile fo line..... \$22,070.60

Funded debt per mile of line..... 23,529.41

Total, per mile of line..... \$45,600.01

INCOME ACCOUNT.

Operating revenues \$51,186.28

Operating expenses 34,984.02

Net operating revenue..... \$16,202.26

Miscellaneous 779.70

Gross income less operating expenses..... \$16,981.96

Deductions from income:

Taxes—

On capital stock \$15.00

On real and personal property..... 1,993.58

\$2,008.58

Interest—		
On funded debt	\$5,000.00	
On floating debt	5,321.81	
	<hr/>	
	\$10,321.81	
Rents of leased line.....	1.00	
	<hr/>	
Total deductions		\$12,331.39
Net income		<hr/> \$4,650.57
Dividends on preferred stock.....	\$1,118.95	
Dividends on common stock.....	3,000.00	
	<hr/>	
		4,118.95
Surplus for year.....		<hr/> \$531.62
Surplus at beginning of year.....		13,663.07
		<hr/>
Surplus at close of year.....		\$14,194.69

OPERATING REVENUES.

Revenue from transportation:		
Passenger revenue	\$18,682.55	
Baggage revenue	266.90	
Mail revenue	876.10	
Express revenue	1,562.74	
Milk revenue	845.52	
Freight revenue	28,599.89	
Miscellaneous transportation revenue.....	352.58	
	<hr/>	
Total revenue from transportation.....		\$51,186.28
Revenue from operations other than transportation:		
Station and car privileges.....	\$100.00	
Rents of buildings and other property.....	253.65	
Miscellaneous	426.05	
	<hr/>	
Total revenue from operations other than transportation		\$779.70
	<hr/>	
Total operating revenues.....		\$51,965.98

STOCKS OWNED.

	Valuation of stocks owned.
Stock of corporations whose property forms a part of the system of respondent corporation:	
Springfield Electric Railway of New Hampshire.....	\$11,200.00
Cheshire Bridge	11,700.00

OPERATING EXPENSES.

Way and structures:		
Superintendence of way and structures.....	\$1,040.00	
Maintenance of way	4,092.63	
Maintenance of electric lines	1,484.75	
Buildings and structures.....	5.25	
	<hr/>	
Total—way and structures.....		\$6,622.63
Equipment:		
Superintendence of equipment.....	\$704.80	
Maintenance of power equipment	162.11	
Maintenance of cars and locomotives	600.14	
Maintenance of electric equipment of cars and locomotives	1,085.04	
Miscellaneous equipment expenses.....	1,095.04	
	<hr/>	
Total—equipment		\$3,647.13

Traffic:	
Traffic expenses	\$263.14
Conducting transportation:	
Superintendence of transportation.....	\$2,500.00
Group I—power—	
Power-plant employees	2,999.05
Fuel for power.....	2,618.51
Other power supplies and expenses.....	2,772.02
Power purchased	4.93
Group II—operation of cars—	
Conductors, motormen, and trainmen.....	6,477.23
Miscellaneous transportation expenses.....	4,288.32
Total—conducting transportation	<u>\$21,660.06</u>
General and miscellaneous:	
General expenses	\$1,617.31
Insurance	387.14
Stationery and printing.....	231.40
Store and stable expenses.....	555.21
Total—general and miscellaneous.....	<u>\$2,791.06</u>
Recapitulation of expenses:	
Way and structures.....	\$6,622.63
Equipment	3,647.13
Traffic	263.14
Conducting transportation	21,660.06
General and miscellaneous.....	2,791.06
Total operating expenses.....	<u>\$34,984.02</u>
Ratio of operating expenses to operating revenues, 67.3%.	

GENERAL BALANCE SHEET.

<i>Assets.</i>	
Cost of road	\$217,965.70
Cost of equipment	65,000.00
Other permanent investments:	
Stocks owned	22,900.00
Cash and current assets.....	6,590.33
Total	<u>\$312,456.03</u>
<i>Liabilities.</i>	
Capital stock, preferred	\$18,800.00
Capital stock, common	75,000.00
Funded debt	100,000.00
Floating debt	90,181.02
Accrued liabilities:	
Interest on funded debt accrued and not yet due.....	2,140.16
Depreciation	12,140.16
Surplus	14,194.69
Total	<u>\$312,456.03</u>

MILEAGE, TRAFFIC, AND MISCELLANEOUS STATISTICS.

Passenger car mileage.....	74,350
Regular fare passengers carried.....	81,207
Revenue transfer passengers carried.....	53,693
Total revenue passengers carried.....	<u>134,900</u>
Passenger revenue	\$18,682.55
Average fare, revenue passengers	23006
Average fare, all passengers	13849
Total revenue from transportation.....	51,186.28
Revenue from transportation per car mile.....	68844
Total revenue from operations other than transportation...	779.70

Revenue from operations other than transportation per car mile .....	.01048
Total operating revenues.....	51,965.98
Operating revenues per car mile.....	.69892
Total operating expenses.....	34,984.02
Operating expenses per car mile.....	.47053

EMPLOYEES.

General administration:	
General officers, 2; general office clerks, 2; total.....	4
Maintenance:	
Superintendents, 1; other employees, 5; total.....	6
Transportation:	
Superintendents, 1; other employees, 14; total.....	15
Total	25

DESCRIPTION OF EQUIPMENT.

Freight cars, with electric equipment.....	3	
Mail cars	}	4
Express cars		
Baggage cars		
Combination cars		
Snowplows		1
Miscellaneous cars, without electric equipment.....		2
		<hr/>
Total cars of all classes.....		10

ACCIDENTS TO PERSONS.

None.

UNCANOONUC INCLINE RAILWAY AND DEVELOPMENT CO.

HISTORY.

Organized April 7, 1903, under laws of the State of New Hampshire.

PRINCIPAL OFFICERS.

President, William W. Forbes, Manchester, N. H.; First Vice-President, John W. Lovering, Sandown, N. H.; Secretary and Treasurer, Jesse B. Pattee, General Manager, Geo. O. Estabrook, Manchester, N. H.

DIRECTORS.

John W. Lovering, Sandown, N. H.; John H. Boyd, Jesse B. Pattee, William W. Forbes, Walter H. Underwood, Parker R. Brown, Manchester, N. H.; Fred H. Emmerson, Lebanon, N. H.

FACTS PERTAINING TO CONTROL.

Date of last meeting of stockholders for election of directors: December 9, 1913.

Date of last closing of stock books before end of year: December 9, 1913.

Total number of stockholders of record: 150.

Each share of stock has one vote.

No issue of securities has contingent voting rights or special privileges in the election of directors.

No individual, association, or corporation, as trustee, controlled the respondent on June 30, 1914.

MILEAGE OF ROAD OPERATED.

Main line, Shirley Station, Goffstown to summit of Uncanoonuc mountain	2.750 miles
Sidings and turnouts .....	.027
Total length of track	2.777 miles

CAPITAL STOCK.

Common: authorized, 1,500 shares, outstanding and not held, 837 shares, par value	\$83,700.00
Dividends declared during year, none.	
Capital stock per mile of line	30,436.36

EXPENDITURES FOR ROAD, EQUIPMENT, ETC.

	Total cost to June 30, 1914.
Road:	
Engineer and superintendence	\$11,314.89
Right of way	2,314.90
Grading	116.91
Ballast	
Ties	} 54,389.20
Rails, rail fastenings, and joints...	
Special work	
Underground construction	
Paving	
Track laying and surfacing	
Roadway tools	
Poles and fixtures	3,804.96
Stations, waiting rooms, and miscellaneous buildings.....	16,247.95
Total	\$88,188.81
Equipment:	
Cars	\$3,735.00
Electric equipment of cars	2,000.00
Other rail equipment	380.00
Miscellaneous equipment	242.10
Total	\$6,357.10
General expenditures:	
Miscellaneous	\$394.04
Recapitulation:	
Road	\$88,188.81
Equipment	6,357.10
General expenditures	394.04
Total	\$94,939.95
Cost of road per mile of line	\$32,068.66
Cost of equipment per mile of line	2,311.67
General expenditures per mile of line	143.28
Total per mile of line	\$34,523.61

INCOME ACCOUNT.

Operating revenues	\$9,753.36
Operating expenses	9,184.46
Net operating revenue	\$568.90
Miscellaneous income	387.65
Gross income less operating expenses	\$956.55

Deductions from income:

Taxes—		
On real and personal property.....	\$328.83	
Internal revenue tax.....	1.65	
	<hr/>	
	\$330.48	
Interest on floating debt.....	996.93	
	<hr/>	
Total deductions		\$1,327.41
		<hr/>
Net loss		\$370.86
Surplus at beginning of year.....		2,568.29
		<hr/>
Total surplus		\$2,197.43
Adjustments during year (Cr.).....		15.00
		<hr/>
Surplus at close of year		\$2,182.43

OPERATING EXPENSES.

Way and structures:		
Maintenance of way	\$268.80	
Maintenance of electric lines.....	4.22	
Buildings and structures.....	23.55	
	<hr/>	
Total—way and structures.....		\$296.57
Equipment:		
Maintenance of cars and locomotives.....	\$239.24	
Miscellaneous equipment expenses.....	3.00	
	<hr/>	
Total—equipment		\$242.24
Traffic:		
Traffic expenses.....	\$447.41	
Conducting transportation:		
Group I—power—		
Other power supplies and expenses.....	\$35.73	
Power purchased	927.43	
Group II—operation of cars—		
Conductors, motormen, and trainmen.....	706.88	
Miscellaneous transportation expenses.....	70.96	
	<hr/>	
Total—conducting transportation		\$1,741.00
General and miscellaneous:		
General expenses	\$5,999.73	
Injuries and damages.....	160.00	
Insurance	297.51	
	<hr/>	
Total—general and miscellaneous.....		\$6,457.24
Recapitulation of expenses:		
Way and structures	\$296.57	
Equipment	242.24	
Traffic	447.41	
Conducting transportation	1,741.00	
General and miscellaneous.....	6,457.24	
	<hr/>	
Total operating expenses		\$9,184.46

COMPARATIVE GENERAL BALANCE SHEET.

Assets.

June 30, 1913.		June 30, 1914.
\$88,188.81	Cost of road	\$88,188.81
6,357.10	Cost of equipment.....	6,357.10
394.04	General expenditures	394.04

	Other permanent investments:	
\$15,000.00	Lands owned	\$14,988.82
475.16	Invested in water-works.....	475.16
1,547.98	Cash and current assets.....	913.40
<hr/> \$111,963.09	Total	<hr/> \$111,317.33

Liabilities.

\$83,700.00	Capital stock, common.....	\$83,700.00
19,632.50	Current liabilities	19,382.13
1,904.80	Suspense	1,804.80
	Miscellaneous:	
4,157.50	Value of land in excess of mortgage liability	4,347.87
2,568.29	Surplus	2,082.53
<hr/> \$111,963.09	Total	<hr/> \$111,317.33

MILEAGE, TRAFFIC, AND MISCELLANEOUS STATISTICS.

Passenger car mileage	21,390
Passenger car hours.....	2,070
Regular fare passengers carried.....	65,572
Passenger revenue	\$5,929.55
Average fare, revenue passengers.....	.09347
Total revenue from transportation.....	5,925.55
Revenue from transportation per car mile.....	.27038
Revenue from transportation per car hour.....	2.86449
Total revenue from operations other than transportation....	3,823.81
Revenue from operations other than transportation per car mile .....	.17436
Revenue from operations other than transportation per car hour	1.84690
Total operating revenues	9,753.36
Operating revenues per car mile.....	.44474
Operating revenues per car hour.....	4.71128
Total operating expenses.....	9,184.96
Operating expenses per car mile.....	.41888
Operating expenses per car hour.....	4.43698

EMPLOYEES.

General administration:	
General officer	1
Maintenance:	
Superintendent	1
Transportation:	
1 superintendent, other employees.....	6
Total	8
Aggregate salaries and wages paid.....	\$1,437.17

DESCRIPTION OF EQUIPMENT.

Passenger cars, open, with electric equipment, 3.

ACCIDENTS TO PERSONS.

Passengers, injured, 1.

SUMMARY OF STREET RAILWAY ACCIDENTS.

	New Hampshire.			United States.		
	Killed.	Injured.	Total.	Killed.	Injured.	Total.
Passengers .....	..	89	89	58	3,229	3,287
Employees .....	..	12	12	49	602	615
Other persons.....	4	2	6	416	1,224	1,640
Total	4	103	107	523	5,055	5,542

STREET RAILWAY STATISTICS.

Name of Company.	Miles of single track.	Cost of road.	Cost of equipment.	Capitalization.	Cost of road per mile of line.	Cost of equipment per mile of line.	Capitaliza- tion per mile of line.
Atlantic Shore Railway.....	90.40	\$3,297,803.72	\$186,122.11	\$3,535,250.00	\$37,637.56	\$2,124.20	\$40,347.52
Bay State St. Ry. Co.....	756.51	35,267,420.55	9,762,128.05	46,742,800.00	49,873.32	13,805.09	66,101.20
Berlin St. Ry.....	7.50	192,100.00	22,900.00	215,000.00	25,613.33	3,053.33	28,666.67
Chester & Derry R. R. Assn.....	7.75	95,528.28	9,000.00	100,000.00	12,326.23	1,161.29	12,903.22
Claremont Ry. & Ltg. Co.....	5.33	249,091.00	75,296.74	310,000.00	29,618.43	8,953.24	36,860.88
Concord & Manchester El. Br.....	28.70	638,344.57	326,051.75	961,732.28	22,241.96	11,360.69	33,509.83
Dover, Somersworth & Rochester St. Ry. Co.....	20.00	541,102.23	113,942.46	675,000.00	27,055.11	5,697.13	33,750.00
Exeter, Hampton & Amesbury St. Ry. Co.....	20.72	238,260.80	45,209.43	250,000.00	11,498.52	2,181.82	12,065.05
Exeter Railway & Ltg. Co.....	.....	.....	.....	365,000.00	.....	.....	.....
Keene Electric Ry. Co.....	8.34	234,527.32	31,669.38	285,900.00	28,120.78	3,797.29	34,280.58
Laconia Street Railway.....	8.36	227,654.38	57,761.47	271,000.00	27,231.38	6,909.26	32,416.27
Manchester St. Ry.....	28.815	1,033,966.07	381,641.59	1,219,500.00	35,882.91	13,244.54	42,321.71
Manchester & Derry St. Ry.....	8.03	262,970.98	48,366.38	300,000.00	32,748.56	6,023.21	37,359.90
Manchester & Nashua St. Ry.....	12.378	391,025.22	37,443.86	440,000.00	31,590.33	3,025.03	35,546.94
Massachusetts Northeastern St. Ry. Co.....	120.42	2,925,474.24	660,611.70	3,035,000.00	24,802.66	5,600.77	25,731.24
Nashua St. Ry.....	14.61	452,343.39	61,932.61	475,000.00	30,961.22	4,239.05	32,511.98
Portsmouth Electric Railway.....	21.51	430,264.36	60,122.98	.....	23,771.51	3,321.71	.....
Springfield El. Ry. of N. H.....	2.25	12,000.00	.....	12,000.00	5,333.33	.....	5,333.33
Springfield El. Ry. of Vt.....	6.50	217,965.70	65,000.00	193,800.00	3,353.31	10,000.00	45,600.01
Uncanoonuc Incline Ry. & Devel- opment Co.....	2.75	88,188.81	6,357.10	83,700.00	32,068.65	2,311.67	30,436.36
Total	1,170.873	\$46,796,031.62	\$11,951,557.61	\$59,470,682.28	\$491,729.10	\$106,809.32	\$585,742.69
Average .....	.....	.....	.....	.....	\$25,880.47	\$5,933.85	\$32,541.28
Maximum .....	.....	.....	.....	.....	49,873.32	13,805.09	66,101.20
Minimum .....	.....	.....	.....	.....	3,353.31	1,161.29	5,333.33
Median .....	.....	.....	.....	.....	27,231.38	4,869.91	33,629.91

STREET RAILWAY STATISTICS.—*Concluded.*

Name of Company.	Operating revenues.	Operating expenses.	Operating ratio, per cent.	Operating revenues per car mile.	Operating revenues per car hour.	Operating expenses per car mile.	Operating expenses per car hour.	Average fare all passen- gers.
Atlantic Shore Railway.....	\$362,771.70	\$284,423.31	78.40	.26590	3.12341	.20847	2.44884	.06111
Bay State St. Ry. Co.....	9,428,113.15	6,304,630.33	66.87	.30675	2.54497	.20513	1.70184	.04292
Berlin St. Ry.....	46,134.25	40,449.54	87.72	.29962	3.48995	.26277	2.67328	.05
Chester & Derry R. R. Assn.....	18,413.40	13,266.19	72.04	.17339	1.9735	.19697	1.4218	.....
Claremont Ry. & Ltg. Co.....	42,424.89	31,910.16	75.21	.39204	2.97793	.29480	2.23977	.051398
Concord & Manchester El. Br.....	190,155.80	107,345.23	56.45	.24975	2.69709	.14099	1.52254	.04390
Dover, Somersworth & Rochester St. Ry. Co.....	109,320.85	84,002.44	76.84	.26625	2.62299	.20458	2.01551	.04926
Exeter, Hampton & Amesbury St. Ry. Co.....	56,763.89	50,416.33	88.82	.21063	2.52205	.18703	2.23943	.05486
Exeter Railway & Ltg. Co.								
Keene Electric Ry. Co.....	33,350.85	23,698.21	71.00	.24487	2.81323	.17400	1.99900	.05724
Laconia Street Railway.....	40,592.87	28,942.42	71.30	.27727	2.39443	.19769	1.70721	.05556
Manchester St. Ry.....	477,113.09	352,542.81	73.89	.35489	2.69540	.26223	1.99165	.04067
Manchester & Derry St. Ry.....	29,608.87	28,153.01	95.08	.25789	3.95259	.24520	3.75824	.05000
Manchester & Nashua St. Ry.....	46,579.02	32,648.48	70.09	.27075	4.98012	.18978	3.49070	.05000
Massachusetts Northeastern St. Ry. Co.....	699,109.77	539,071.85	77.10	.27466	3.16455	.21178	2.44013	.04752
Nashua St. Ry.....	103,085.51	81,367.72	78.93	.23554	1.98016	.18612	1.56299	.04567
Portsmouth Electric Railway.....	72,037.93	66,714.66	90.26	.19311	1.40094	.17884	1.29742	.04661
Springfield El. Ry. of Vt.....	51,186.28	34,984.02	67.30	.69892	.....	.47053	.....	.13849
Uncanoone Incline Ry. & Devel- opment Co.	9,753.36	9,184.46	94.15	.44474	4.71128	.41888	4.43698	.....
Total	\$11,816,515.48	\$8,113,751.17						
Average			77.30	.30649	2.94381	.23532	2.29101	.05532
Maximum			95.08	.69892	4.98012	.47053	4.43698	.13849
Minimum			56.45	.19311	1.40094	.14099	1.29742	.04067
Median			76.03	.27207	2.69709	.20486	2.01551	.05

PART IV.

REPORTS OF EXPRESS COMPANIES

For The Year Ending June 30, 1914.

AMERICAN EXPRESS COMPANY.

NEW YORK, N. Y.

HISTORY.

Organized March 18, 1850, and November 15, 1859, under the common law of the State of New York.

The American Express Company and the Merchants Union Express Company were merged into one company named American Express Company by articles of Merger and Association, dated November 25, 1868, and amendments thereto. Each of the constituent companies was an unincorporated association organized under the common law of the State of New York.

The New England Despatch Company is a corporation under the laws of Massachusetts, which, many years ago, did business in that state. The business now done by it is confined to business between Boston, Mass., and points in New York, N. Y., south of 59th Street, and between Worcester, Mass., and points in New York, N. Y., south of 59th Street, in competition with the New York and Boston Despatch Express Company, operated between New York and Boston by a boat line to Providence or Fall River and thence by railroad to Boston.

This report includes the operation of the National Express Company, such operations being entirely for and on account of the American Express Company.

PRINCIPAL OFFICERS.

President, George C. Taylor; First Vice-President, Francis F. Flagg; Secretary, William C. Fargo; Vice-President and Treasurer, James F. Fargo; General Counsel, Carter, Ledyard & Milburn; Comptroller, William E. Powelson; Vice-President and General Manager, Eastern Dept., Henry A. Julier, New York, N. Y.; Vice-President and General Manager, Western Dept., J. A. D. Vickers, Chicago, Ill.; General Manager of Foreign Dept., Canada and U. S., Marcellus F. Berry, New York, N. Y.; General Director, Foreign Dept, Europe, William A. Dalliba, Paris, France; Manager, Dept. of Equipment and Supplies, Elisha Flagg; Vice-President and General Traffic Manager, John H. Bradley; Assistant General Traffic Manager, Edwin E. Bush, New York, N. Y.

DIRECTORS.

George C. Taylor, James C. Fargo, Francis F. Flagg, Charles M. Pratt, John H. Bradley, Cornelius Vanderbilt, J. Horace Harding, John G. Milburn, James S. Alexander, New York, N. Y.

CORPORATIONS CONTROLLED BY RESPONDENT.

Active corporations, direct control:

National Express Company, sole, established by ownership of interests, extent, 99%.

New England Despatch Company, sole, established by ownership of stock, extent, 100%.

Wescott Express Company, sole, established by ownership of stock, extent, 100%.

FACTS PERTAINING TO CONTROL.

Date of last meeting of stockholders for election of directors: the directors hold quarterly meetings on the second Wednesday of February, May, August and November of each year, at which time the election of directors may take place if necessary to fill vacancies occasioned by death, resignation or other causes. The last election of a director prior to June 30, 1914, occurred at an adjourned meeting of the Board of Directors held on June 16, 1914.

Total number of shareholders of record June 30, 1914: 4,070.

Each share of stock has one vote.

No issue of securities has contingent voting rights or special privileges in the election of directors.

This company is subject to no outside control.

MILEAGE COVERED.

State or Territory.	Steam- road mileage.	Electric line mileage.	Steamboat line mileage.	Miscella- neous mileage.	Total mileage.
New Hampshire ...	1,151.77	3.00	.....	.....	1,154.77
All other states and Canada	56,668.93	1,059.38	898.50	7.00	58,633.81
Mileage not assign- able to states or territories .....	.....	.....	.....	1,730.25	1,730.25
Total	57,820.70	1,062.38	898.50	1,737.25	59,788.58

MILEAGE COVERED IN OUTSIDE OPERATIONS.

Ocean-going mileage	68,284
Mileage in foreign countries.....	8,678

CAPITAL STOCK.

Number of shares authorized, 180,000.....	\$18,000,000.00
Total par value held by respondent in treasury.....	481,000.00
Total par value not held by respondent.....	17,519,000.00
Dividends declared during year, 8%.....	1,400,800.00
Total cash realized	900,000.00

Stock issued in exchange for shares of the American Express Company and shares of the Merchants Union Express Company under the provisions of the articles of merger dated November 25, 1868.

The assets of the two constituent companies became the property of the American Express Company and were as follows:

Cash on hand	\$183,819.13
Securities	1,261,023.87
Real estate,	\$2,200,300.00
Less mortgages payable on same	505,143.00
Personal property (equipment).....	1,695,157.00
	1,260,000.00
Total	\$4,400,000.00

The above together with the cash realized in issue of its shares or interests, makes the total assets of the American Express Company upon its organization, \$5,300,000.00.

NOTE.—By the Articles of Association there is no stock properly so called. The property of the company is represented by shares, which for the purpose only of this report, and to conform to the nomenclature of this form, are called stock.

MISCELLANEOUS INVESTMENTS—PHYSICAL PROPERTY.

Revenue (or income).....	\$99,636.00
Expenses	19,806.21
Taxes	18,407.62
Net income	\$61,422.17
Book value	1,922,678.26

COST OF REAL PROPERTY AND EQUIPMENT.
Expenditures for Real Property and Equipment During the Year.

Account.	Directly charged.	Credits for property retired.	Total.	Total cost to June 30, 1913.	Total cost to June 30, 1914.
Real property and equipment:					
Real estate	\$91,737.58	\$31,000.00	\$60,737.58	\$3,736,079.14	\$3,796,816.72
Buildings and fixtures	463,672.96	41,608.85	422,064.11	3,772,114.76	4,194,178.87
Equipment:					
Office equipment	130,783.55	42,957.37	87,826.18	1,440,472.60	1,528,298.78
Horses	249,529.27	264,277.78	14,748.51	1,090,708.31	1,075,959.80
Vehicles	178,524.74	97,504.64	81,020.10	2,430,901.88	2,511,921.98
Stable equipment	31,772.56	11,112.87	20,659.69	142,371.82	163,031.51
Transportation equipment....	34,578.31	25,846.02	8,732.29	178,818.94	187,551.23
Total	\$1,180,598.97	\$514,307.53	\$666,291.44	\$12,791,467.45	\$13,457,758.89

RESERVES FOR ACCRUED DEPRECIATION—Dr.

Account.	Amounts credited during the year.	Amounts charged during the year.	Net balance for the year.	Total on June 30, 1913.	Total on June 30, 1914.
Buildings and fixtures	\$8,432.60	\$9,680.31	\$1,247.71	\$46,190.79	\$44,943.08
Other equipment:					
Office equipment	112,774.45	42,957.37	69,817.08*	418,404.57	488,221.65
Horses	255,445.49	264,277.78	8,832.29*	305,094.34	296,262.05
Vehicles	301,593.98	97,504.64	204,089.34*	609,915.29	814,004.63
Stable equipment	20,041.23	11,112.87	8,928.36*	64,317.63	73,245.99
Transportation equipment	33,305.94	25,846.02	7,459.92*	41,969.27	49,429.19
Total	\$731,593.69	\$451,378.99	\$280,214.70	\$1,485,891.89	\$1,766,106.59

*It will be seen that the charge to Reserve for Depreciation for Equipment retired is the same as the Credit to Cost Account. This is due to the fact that the retirements are ascertained by a comparison of the inventory with the previous year's inventory plus purchases during year, and that process results in bringing the Reserve for Depreciation up to the Cost before the retirements are closed out.

INCOME ACCOUNT.

Operating income:		
Express operations—		
Gross receipts from operation.....	\$45,102,949.38	
Express privileges	22,151,806.43	
Operating revenues	\$22,951,142.95	
Operating expenses	23,214,574.71	
Net operating deficit	\$263,431.76	
Taxes accrued	381,337.90	
Operating loss	\$644,769.66	
Other income:		
Dividends declared on stocks owned or controlled	\$306,611.00	
Interest accrued on funded debt owned or controlled	199,596.19	
Interest on other securities, loans, and accounts	48,605.32	
Net income from miscellaneous investments—physical property	61,422.17	
Miscellaneous income	2,390.90	
Total other income.....	618,625.58	
Gross corporate loss.....	\$26,144.08	
Deductions from gross corporate income:		
Other interest	\$142,662.73	
Other deductions:		
Hire of equipment	28,197.43	
Amortization of premium and discount on bonds owned	2,395.90	
Interest on equipment at joint offices..	1,315.00	
Dividends paid to shareholders National Ex. Co.	36.00	
Total deductions from gross corporate income.....	174,607.06	
Net corporate loss	\$200,751.14	

PROFIT AND LOSS ACCOUNT.

Debit.

Balance for year brought forward from income account....	\$200,751.14
Deductions for year:	
Disbursements for expenses in current year applicable to periods prior to July 1, 1913.....	216,173.14
Taxes paid during current year applicable to periods prior to July 1, 1913	7,043.03
Bad debts	712.32
Dividends paid to shareholders National Ex. Co. other than American Express Co., applicable to periods prior to July 1, 1913.....	9.00
Difference between cost and par value of company's shares purchased during year.....	6,012.50
Adjustment of book values of securities owned by company	3,077,930.13
Distribution to shareholders of Wells Fargo & Co.'s stock held by company	9,000,000.00
Loss on sale of securities owned.....	17.02
Dividends declared:	
*3% declared on Aug. 12, 1913; payable on Oct. 1, 1913..	525,300.00
†2% declared on Dec. 3, 1913; payable on Jan. 2, 1914..	350,200.00
*1½% declared on Mar. 11, 1914; payable on Apr. 1, 1914	262,650.00
‡1½% declared on June 10, 1914; payable July 1, 1914	262,650.00
Balance credit, June 30, 1914, carried to general balance sheet	\$5,875,929.56
Total	\$19,785,377.84

*From income from investments..

†From income from operations.

‡Not specified.

PROFIT AND LOSS ACCOUNT.

Credit.

Balance June 30, 1913.....	\$19,298,460.83
Additions for year:	
Receipts during current year applicable to periods prior to July 1, 1913.....	582.73
Credits received in readjustment of expenses included in periods prior to July 1, 1913.....	2,387.75
To set up Provender on hand June 30, 1914.....	22,303.78
Value of real estate, buildings and mortgage loan receivable taken over from Westcott Express Co.....	274,385.41
Difference between sale price and par value of company's shares sold during year.....	349.71
Profit on sale of real estate.....	4,983.04
Profit on sales of securities owned.....	59,424.59
Value of Wells Fargo & Co.'s stock received by American Express Co. as their proportionate share of the distribution made to shareholders	122,500.00
Total	\$19,785,377.84

OPERATING REVENUES.

	Total receipts.	Total deductions.	Total revenues.
Total revenue from transportation	\$44,648,166.14	\$1,688,698.81	\$42,959,467.33
Total revenue from operations other than transportation			2,143,482.05
Gross receipts from operation			\$45,102,949.38
Express privileges			22,151,806.43
Total operating revenues			\$22,951,142.95

SUMMARY OF SECURITIES OWNED.

Stocks	\$11,486,591.00
Funded debt	4,936,100.00
Miscellaneous securities	86,565.00
Dividends on stocks.....	306,611.00
Dividends on funded debt	199,596.19
Dividends on miscellaneous statistics.....	2,973.76

OPERATING EXPENSES.

Recapitulation of expenses:	
Maintenance	\$1,313,497.05
Traffic expenses	479,802.98
Transportation expenses	19,626,828.45
General expenses	1,794,446.23
Total operating expenses.....	\$23,214,574.71
Ratio of operating expenses to operating revenues, 101.15%.	

MISCELLANEOUS INCOME.

Gross income	\$2,390.90
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TAXES AND ASSESSMENTS.						
		<i>Specific Tax.</i>				
		<i>Ad valorem Tax.</i>				
		On the value of real and personal property.	On the value of stocks or bonds, or on valuation based on earnings, dividends or other results of operation.	On gross or net earnings, revenue or dividends.	On traffic, or some physical quality of property operated or on privilege.	Internal Revenue U. S. Government.
					Miscellaneous.		Total.
New Hampshire		\$10.96	\$6,112.50	.....	.....	\$6,123.46
All other states and countries		136,364.10	217,502.91	\$1,270.00	\$23,977.28	375,214.44
Total		\$136,375.06	\$223,615.41	\$1,270.00	\$23,977.28	\$381,337.90

COMPARATIVE GENERAL BALANCE SHEET

Assets.

June 30, 1913.		June 30, 1914.
	Permanent and long term investments:	
	Real property and equipment—	
	Investments—	
\$3,736,079.14	Real estate	\$3,796,816.72
3,772,114.76	Buildings and fixtures.....	4,194,178.87
5,283,273.55	Equipment	5,466,763.30
<u>\$12,791,467.45</u>		<u>\$13,457,758.89</u>
1,485,891.89	Reserves for accrued depreciation.....	1,766,106.59
<u>\$11,305,575.56</u>	Total	<u>\$11,691,652.30</u>
	Securities—	
	Securities of system corporations—un-	
	pledged—	
\$288,781.50	Stocks	\$288,781.50
	Miscellaneous—	
	Miscellaneous investments—	
\$1,903,292.85	Physical property	\$1,922,678.26
24,547,474.45	Securities—unpledged	11,698,944.53
<u>\$26,450,767.30</u>	Total	<u>\$13,621,622.79</u>
	Working assets:	
\$4,702,196.96	Cash	\$3,947,507.61
	Securities issued or assumed—held in	
	treasury—	
480,000.00	Stocks	481,000.00
4,577.50	Loans and bills receivable	1,004,100.08
188,500.96	Traffic balances due from other com-	
	panies	142,453.09
5,010,876.16	Net balance due from agents and mes-	
12,038,000.64	sengers	4,222,247.03
199,768.55	Miscellaneous accounts receivable.....	7,998,083.40
150,920.80	Materials and supplies	222,579.47
	Other working assets.....	159,681.29
<u>\$22,774,841.57</u>	Total	<u>\$18,177,651.97</u>
	Accrued income not due:	
\$347,852.53	Unmatured interest, rents, and dividends	
	receivable	\$115,004.80
	Deferred debit items:	
	Temporary advances—	
\$1,000.00	Working funds	\$1,000.00
1,440.34	Other temporary advances	520.00
5,272.81	Rents and insurance paid in advance...	2,708.39
63,785.82	Taxes paid in advance.....	74,465.44
21,171.55	Special deposits	22,236.49
.....	Insurance and other reserve fund assets	180,000.00
289,816.32	Other deferred debit items.....	33,441.97
<u>\$382,486.84</u>	Total	<u>\$314,372.29</u>
<u>\$61,550,305.30</u>	Grand total	<u>\$44,209,085.65</u>

Liabilities.

	Stock:	
	Interests	
	(held by company)....	\$481,000.00
\$18,000,000.00	(not held by company).	17,519.00
		<u>\$18,000,000.00</u>

	Working liabilities:	
\$2,000,000.00	Loans and bills payable	
85,071.46	Traffic balances due to other companies	\$47,678.46
2,223,420.60	Audited vouchers and wages unpaid....	2,254,556.27
1,361,630.75	Miscellaneous accounts payable.....	859,850.00
554,641.98	Matured interest, rents and dividends unpaid	291,191.98
15,432,000.50	Unpaid money orders, checks and drafts	14,730,105.84
1,938,389.40	Express privileges	1,342,683.06
<u>\$23,595,154.69</u>	Total	<u>\$19,526,065.61</u>
	Accrued liabilities not due:	
\$522.49	Unmatured interest, rents and dividends payable	\$9.00
179,650.01	Taxes accrued	164,399.06
<u>\$180,172.50</u>	Total	<u>\$164,408.06</u>
	Deferred credit items:	
\$267,470.38	Operating reserves	\$395,285.97
106,962.08	Liability on account of guaranty or indemnity funds.....	83,096.89
102,084.82	Other deferred credit items.....	164,299.56
<u>\$476,517.28</u>	Total	<u>\$642,682.42</u>
	Profit and loss:	
19,298,460.83	Balance	5,875,929.56
<u>\$61,550,305.30</u>	Grand total	<u>\$44,209,085.65</u>

COMPARATIVE STATISTICS OF EQUIPMENT OWNED.

	June 30, 1913.		June 30, 1914.	
	Number.	Value.	Number.	Value.
All classes	90,987½	\$3,843,572.45	93,115½	\$3,745,599.79

STATISTICS OF FINANCIAL PAPER ISSUED.

Number of orders, checks, etc., 9,591,155; amount, \$375,845,981.71.
 Number of express offices in the United States June 30, 1914, 7,856.
 Number of express offices outside the United States June 30, 1914, 163.
 Number of offices in the United States at which money orders were on sale June 30, 1914, 7,127.
 Number of offices outside the United States at which money orders were on sale June 30, 1914, 127.

ATLANTIC EXPRESS COMPANY.

PORTLAND, ME.

HISTORY.

Organized October, 1913, under the laws of the State of Maine.

PRINCIPAL OFFICERS.

Chairman of the Board, President and General Manager, L. E. Porter; Secretary, Chas. G. Keene, Portland, Me.; Treasurer, W. P. Sawyer, Lewiston, Me.

DIRECTORS.

L. E. Porter, Chas. G. Keene, Portland, Me.; W. P. Sawyer, Lewiston, Me.

FACTS PERTAINING TO CONTROL.

Date of last meeting of stockholders for election of directors: October 1, 1913.

Date of last closing of stock books before end of year: October 1, 1913.

Total number of stockholders of record: 3.

Each share of stock has one vote.

No issue of securities has contingent voting rights or special privileges in the election of directors.

MILEAGE COVERED.

By States and Territories.

State or Territory.	Electric- line mileage.	Steamboat line mileage.	Total mileage.
Maine	2.34	.57	2.91
New Hampshire .....	.03	..	.03
Massachusetts .....	.58	..	.58
Total	2.95	.57	3.52

CAPITAL STOCK.

Common, authorized, 2000 shares.....	\$200,000.00
Total par value outstanding	1,600.00
Total par value held by respondent in treasury.....	198,400.00
Dividends declared during year, none.	
Issued for cash, common, 16 shares.....	1,600.00

COST OF REAL PROPERTY AND EQUIPMENT.

Equipment, horses, from special appropriations and through issue of securities.....	\$1,800.00
Total receipts	\$206,646.51
Disbursements:	
Transportation charges	\$82,624.76
Office expense	20,656.19
Labor	86,356.90
Stable	10,328.06
Claims	4,123.78
Printing	1,472.80
Interest and taxes	1,000.00
Total	206,561.49
Net receipts	\$85.02

TAXES AND ASSESSMENTS.

	Specific tax on gross or net earnings, revenue or dividends.
Maine	\$497.22
New Hampshire	192.00
Total	\$689.22

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:	
Due from offices	\$9,481.34
Rolling stock	15,000.00
Accounts receivable	1,175.68
Interest receivable	548.00
Cash	2,494.03
Deficit	18,978.40
Total	\$47,677.45

Liabilities.

Current liabilities:	
Due offices	\$1,112.68
Capital stock	1,600.00
Accounts payable	44,964.77
Total	<u>\$47,677.45</u>

COMPARATIVE STATISTICS OF EQUIPMENT OWNED.

	June 30, 1914.	
	Number.	Value.
Office equipment:		
Office furniture and fixtures.....	65	\$1,500.00
Horses and other draft animals.....	38	5,700.00
Vehicles:		
Double wagons	2	400.00
Single wagons	42	3,500.00
Sleighs	23	460.00
Stable equipment (including harness).....	72	440.00
All other equipment .....	..	420.00
Total .....	..	<u>\$12,420.00</u>
Number of express offices in the United States.....		27
Number of offices in the United States at which money orders were on sale, June 30, 1914.....		11

THE CANADIAN EXPRESS COMPANY.

MONTREAL, CANADA.

HISTORY.

Organized February 16, 1865, under the laws of the Dominion of Canada, pursuant to the Act of the Provincial Legislature, 27 and 28 Vic. cap. 23.

PRINCIPAL OFFICERS.

Chairman of the Board, E. J. Chamberlin; Secretary and Treasurer, Frank Scott; Attorney, W. H. Biggar; General Auditor, W. W. Williamson, Montreal, Canada.

DIRECTORS.

E. J. Chamberlin, John Pullen, Frank Scott, Hugh Paton, Montreal, Canada.

FACTS PERTAINING TO CONTROL.

Date of last meeting of stockholders for election of directors: March 24, 1914.

Date of last closing of stock books before end of year: March 14, 1914.

Total number of stockholders of record: 5.

Each share of stock has one vote.

No issue of securities has contingent voting rights or special privileges in the election of directors.

The Grand Trunk Railway Company controlled the respondent on June 30, 1914, by stock purchase.

Trustees controlling the respondent on June 30, 1914: A. W. Smithers, E. J. Chamberlin, John Pullen, Frank Scott and Hugh Paton.

Beneficiary for whom the trust was maintained: The Grand Trunk Railway Company.

MILEAGE COVERED.

By States and Territories.

State or Territory.	Steam-road mileage.	Electric line mileage.	Steamboat line mileage.	Stage line mileage.	Miscellaneous mileage.	Total mileage.
Canada	8,594.51	66	1,335	22	2	10,019.51
Maine	89	..	.....	..	..	89
Michigan	57.02	..	.....	..	..	57.02
New Hampshire	53	..	.....	..	..	53
New York.....	26	..	.....	..	..	26
Vermont	32	..	.....	..	..	32
Total	8,851.53	66	1,335	22	2	10,276.53

MILEAGE COVERED IN OUTSIDE OPERATIONS.

Ocean-going mileage, 26.30 miles.

CAPITAL STOCK.

Common, authorized, 30,000 shares	\$3,000,000.00
Total par value outstanding and not held.....	1,742,200.00
Dividends declared during year, none.	
Issued for real property and equipment during year, 370 shares, issued	37,000.00
Total 2,422 shares outstanding	242,000.00

COST OF REAL PROPERTY AND EQUIPMENT.

	Total cost to June 30, 1913.	Total cost to June 30, 1914.
Real property and equipment:		
Real estate, buildings and fixtures....	\$260,200.00	\$260,000.00
Equipment:		
Office equipment	39,307.88	40,546.88
Horses	45,765.36	57,835.39
Vehicles	51,526.79	74,464.26
Stable equipment	5,802.31	6,555.81
Transportation equipment	8,265.79	8,265.79
Total	\$410,868.13	\$447,668.13

INCOME ACCOUNT.

Operating income:		
Express operations:		
Gross receipts from operation.....	\$3,450,245.95	
Express privileges	1,666,472.55	
Operating revenues		\$1,783,773.40
Operating expenses		1,661,834.32
Net operating revenue		\$121,939.08
Outside operations:		
Revenues	\$21,068.75	
Expenses	15,242.25	
Net revenue from outside operations.....		5,826.50
Total net revenue		\$127,765.58
Taxes accrued		38,949.34
Net corporate income turned over to Grand Trunk Ry. Co.		\$88,816.24

OPERATING REVENUES.

Revenue from transportation	\$3,341,982.54
Revenue from operations other than transportation:	
Custom house brokerage fees	\$638.97
Money orders—domestic	64,671.11
Travelers' checks—foreign	881.16
"C. O. D." checks	28,062.65
Telegraphic transfers	92.19
Other revenue—financial department.....	1,025.29
Miscellaneous revenue	12,892.04
Total revenue from operations other than transportation	<u>\$108,263.41</u>
Gross receipts from operation.....	\$3,450,245.95
Express privileges—Dr.....	1,666,472.55
Total operating revenues	<u>\$1,783,773.40</u>

OPERATING EXPENSES.

Maintenance:	
Office equipment	\$3,210.31
Horses	7,825.00
Vehicles—repairs	25,384.07
Vehicles—renewals	2,506.25
Stable equipment	3,724.49
Total—maintenance	<u>\$42,650.12</u>
Traffic expenses:	
Superintendence	\$3,960.00
Outside agencies	3,264.69
Advertising	226.50
Traffic associations	3,533.88
Stationery and printing	3,733.36
Total—traffic expenses	<u>\$14,718.43</u>
Transportation expenses:	
Superintendence	\$58,741.75
Office employees	379,261.95
Commissions	357,579.60
Wagon employees	187,827.14
Office supplies and expenses.....	32,442.59
Rent of local offices	44,125.81
Stable employees	17,675.62
Stable supplies and expenses.....	105,083.60
Train employees	156,215.43
Train supplies and expenses.....	1,500.00
Transfer employees	36,955.39
Stationery and printing	39,499.79
Loss and damage—freight.....	62,532.67
Loss and damage—money	602.82
Damage to property.....	173.78
Injuries to persons.....	826.02
Total—transportation expenses	<u>\$1,481,043.96</u>

General expenses:

Salaries and expenses of general officers.....	\$23,759.80
Salaries and expenses of clerks and attendants.....	69,146.92
General office supplies and expenses.....	13,574.28
Law expenses	490.55
Insurance	6,482.14
Pensions	6,000.00
Stationery and printing	1,418.12
Other expenses	2,550.00

Total—general expenses	<u>\$123,421.81</u>
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Recapitulation of expenses:

Maintenance	\$42,650.12
Traffic expenses	14,718.43
Transportation expenses	1,481,043.96
General expenses	<u>123,421.81</u>

Total operating expenses.....	<u>\$1,661,834.32</u>
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Ratio of operating expenses to operating revenues, 93.17%.

OUTSIDE OPERATIONS.

	Revenues.	Expenses.	Net revenue.
Ocean transportation	\$21,068.75	\$15,242.25	\$5,826.50

TAXES AND ASSESSMENTS.

	<i>Ad valorem Tax.</i>		<i>Specific Tax.</i>		Total.
	On the value of real and personal property.	On the value of stocks or bonds, or on valuation based on earnings, dividends, or other results of operation.	On stocks, bonds, loans, etc.	On gross or net earnings, revenue or dividends.	
Canada	\$14,094.55	.....	\$1,870.20	.....	\$36,129.75
Maine .....	.....	.....	.....	\$1,297.54	1,297.54
Michigan .....	.....	\$431.17	.....	.....	431.17
New Hampshire .....	.....	400.00	.....	.....	400.00
Vermont .....	.....	.....	.....	690.88	690.88
Total	\$14,094.55	\$831.17	\$1,870.20	\$1,297.54	\$38,949.34

COMPARATIVE GENERAL BALANCE SHEET.

June 30, 1913.		<i>Assets.</i>	June 30, 1914.
		Permanent and long term investments:	
		Real property and equipment—	
		Investment—	
\$260,200.00		Real estate, buildings and fixtures..	\$260,200.00
150,668.13		Equipment	187,668.13
\$410,868.13		Total	\$447,868.13
		Working assets:	
\$177,640.44		Cash	\$177,684.06
19,482.29		Traffic balances due from other corpora-	6,905.77
		tions	
84,287.18		Net balance due from agents and mes-	91,110.17
242,192.61		sengers	250,998.88
2,710.60		Miscellaneous accounts receivable.....	3,289.77
		Materials and supplies.....	
\$526,313.12		Total	\$529,988.65
		Profit and loss:	
		Balance—	
1,291,621.27		Charter, contract, good-will, etc.....	1,291,042.10
\$2,228,802.52		Grand total	\$2,268,898.88
<i>Liabilities.</i>			
		Stock:	
\$1,705,200.00		Capital stock	\$1,742,200.00
		Working liabilities:	
\$69,572.18		Traffic balances due to other companies.	\$49,507.38
139,880.44		Audited vouchers and wages unpaid....	137,513.11
132,586.93		Unpaid money orders, checks, and drafts	139,844.34
133,948.61		Express privileges	143,514.69
47,614.36		Other working liabilities.....	56,319.36
\$523,602.52		Total	\$526,698.88
\$2,228,802.52		Grand total	\$2,268,898.88

COMPARATIVE STATISTICS OF EQUIPMENT OWNED.

	June 30, 1913.		June 30, 1914.	
	Number.	Value.	Number.	Value.
Office equipment:				
Four-wheel trucks	605	\$11,475.00	663	\$11,475.00
Office furniture and fixtures...	....	14,222.88	....	22,741.28
Office safes	221	13,610.00	299	13,850.00
Horses and other draft animals..	397	45,765.36	372	57,835.39
Vehicles:				
Automobiles .....	....	....	5	17,366.44
Double wagons	58	10,565.60	45	10,055.10
Single wagons	301	30,620.30	297	30,125.00
Sleighs	265	10,340.89	247	10,105.00
Stable equipment (including harness)	229	5,802.31	221	5,685.63
Transportation equipment:				
Car safes	4	375.00	4	750.00
Messenger's safes	213	2,742.70	194	2,531.20
Messenger's packing trunks...	368	4,468.99	288	4,468.99
All other equipment.....	....	679.10	....	679.10
Total	2,661	\$150,668.13	2,635	\$187,668.13

STATISTICS OF FINANCIAL PAPER ISSUED.

	Number.	Amount.
Money orders sold—domestic.....	943,439	\$11,586,100.54
Travelers' checks sold—foreign.....	7,158	152,132.27
"C. O. D." checks issued.....	136,827	1,686,194.32
Telegraphic transfers	163	6,839.86
Other forms of remittance paper issued.....	4,771	542,070.70
Total	1,092,358	\$13,973,337.69

Number of express offices in the United States, June 30, 1914, 1,024.

Number of offices in the United States at which money orders were on sale, June 30, 1914, 49.

NATIONAL EXPRESS COMPANY.

NEW YORK, N. Y.

HISTORY.

Organized April 1, 1895, under the common law of the State of New York.

The National Express Company is an unincorporated association organized by the American Express Company with a nominal capital of \$500,000, of which \$475,000 was issued, in the inception, to the American Express Company, the remaining \$25,000, being subscribed for at par by directors and others connected with the American Express Company, under an agreement under which the American Express Company had a right to take over their shares at any time, at actual cost. Since the formation of this company, the American Express Company has, in one or two instances, upon the death of the individual stockholders, acquired their stock at cost under the option above mentioned. All the property which the company received upon its organization it received from the American Express Company in consideration of the issue of its stock to that company, excepting the cash contribution of \$25,000, above mentioned, from individual stockholders. The National Express Company does not operate any express business for its own account, the express business carried on by said company being actually carried on by it as agent of the American Express Company and for its account, under an agreement between National Express Company and American Express Company, effective July 1, 1912.

PRINCIPAL OFFICERS.

President and First Vice-President, Francis F. Flagg; Secretary, William C. Fargo; Treasurer, James F. Fargo; General Counsel, Carter, Ledyard & Milburn; Comptroller, William E. Powelson; Vice-President and General Manager, Eastern Dept., Tunis N. Smith, New York, N. Y.; General Manager, Western Dept., Joseph H. Butler, Chicago, Ill.; General Traffic Manager, John H. Bradley; Assistant General Traffic Manager, Edwin E. Bush, New York, N. Y.

DIRECTORS.

George C. Taylor, Francis F. Flagg, William C. Fargo, James F. Fargo, Tunis N. Smith, New York, N. Y.

FACTS PERTAINING TO CONTROL.

Date of last meeting of stockholders for election of directors: the Board of Directors of the National Express Company are deemed to be in permanent session. There are no stated dates for meetings. The election of directors may take place at any meeting, if necessary to fill vacancies occasioned by death, resignation or other causes. Previous to June 30, 1914, the last meeting at which an election of directors took place was held June 29, 1914.

Total number of shareholders of record June 30, 1914: 7.

Each share of stock has one vote.

No issue of securities has contingent voting rights or special privileges in the election of directors.

The American Express Company controlled the respondent on June 30, 1914, by ownership of the majority of the shares.

Extent of control: 99%. Control, direct.

MILEAGE COVERED.

All lines over which the National Express Company operates as agent of the American Express company are included in the report of the latter company. Such lines are:

Boston & Maine Railroad
Central Vermont
Delaware and Hudson
Grand Trunk Railway
Rouse's Point Branch
Hemmingford Branch
Greenwich and Johnsonville
Middleburgh and Schoharie
New York Central and Hudson River
Rutland
Schoharie Valley

Electric lines:

Hudson Valley
Keeseville, Ausable Chasm and Lake Champlain

Steamboat lines:

Hudson Navigation Co.

CAPITAL STOCK.

Number of shares authorized, 5,000.....	\$500,000.00
Dividends declared during year, none.	
6% paid directly by American Express Co. to shareholders other than American Express Co.	
Total number of shares outstanding, 5,000; total cash realized	*\$75,500.00

COMPARATIVE GENERAL BALANCE SHEET.

Assets.

June 30, 1913.		June 30, 1914.
	Miscellaneous investments—	
\$398,528.10	Good-will and contracts.....	\$398,528.10
	Working assets:	
101,471.90	Miscellaneous accounts receivable....	101,471.90
<hr/>		<hr/>
\$500,000.00	Grand total	\$500,000.00

Liabilities.

	Stock:	
\$500,000.00	Interests not held by company.....	\$500,000.00
<hr/>		<hr/>
\$500,000.00	Grand total	\$500,000.00

*In addition to the cash realized from the issue of its shares, the company also received the following property:

Personal property (equipment).....	\$25,971.90
Good-will and contracts.....	398,528.10
<hr/>	
Total	\$424,500.00

The above together with the cash realized made the total assets of the company..... \$500,000.00

PART V.

REPORTS OF ELECTRIC UTILITIES

For the Year Ending June 30, 1914.

THE WILLIAM F. ALLEN COMPANY.

WEST STEWARTSTOWN, N. H.

PRINCIPAL OFFICERS.

President T. H. Van Dyke,* Beecher Falls, Vt.; Vice-President and Treasurer, Edw. W. Lawler, West Stewartstown, N. H.; Clerk, Merrill Shurtleff, Lancaster, N. H.; General Manager, Wilman F. Allen, West Stewartstown, N. H.

DIRECTORS.

Wilman F. Allen, Henry A. Allen, West Stewartstown, N. H.; T. H. Van Dyke,* Beecher Falls, Vt.

HISTORY.

Incorporated March 20, 1907, under the general laws of the State of New Hampshire. Amended November 19, 1907.

LOCALITIES SERVED.

West Stewartstown and Colebrook, N. H., Canaan and Beecher Falls, Vt.

CAPITAL STOCK.

Common, authorized and outstanding, 300 shares, par value	\$30,000.00
Dividends declared during year, none.	
Number of stockholders, 3; number in New Hampshire, 2.	
Par value of stock held in New Hampshire.....	\$13,800.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$157.27	
Bills receivable	1,076.84	
Accounts receivable	9,057.82	
		\$10,291.93
Materials and supplies.....		2,221.77
Investments		21,034.99
Fixed capital—electric		51,419.97
Fixed capital—other departments.....		8,903.84
Deficit		827.99
Total		\$94,700.49

Liabilities.

Current liabilities:		
Taxes accrued	\$780.74	
Interest accrued on funded debt.....	1,463.54	
Bills payable	7,350.00	
Accounts payable	7,288.87	
		\$16,883.15
Funded debt		47,817.34
Capital stock—common		30,000.00
Total		\$94,700.49

*Died June 13, 1914.

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting	\$8,554.08	
Municipal lighting	1,320.29	
Total operating revenues		\$9,874.37
Operating expenses:		
Production	\$1,927.89	
Transmission and distribution.....	1,368.50	
Insurance	326.75	
Loss on supplies	557.34	
Miscellaneous	6,522.88	
Total operating expenses	\$10,703.36	
Taxes	794.74	
Total revenue deductions		11,498.10
Gross operating loss		\$1,623.73
Non-operating revenues:		
Rent from real estate	\$124.00	
Other non-operating revenues	8.85	
Total non-operating revenues	\$132.85	
Non-operating expenses	292.42	
Deficit		159.57
Gross deficit		\$1,783.30
Deductions from gross income:		
Interest on funded debt.....	\$2,986.00	
Interest on unfunded debt.....	24.36	
Total deductions from gross income.....		3,010.36
Net loss		\$4,793.66
Surplus at beginning of year.....		\$3,965.67
Total deficit		\$827.99

MISCELLANEOUS STATISTICS.

Number of miles of overhead circuit.....	32 $\frac{3}{4}$
Poles:	
Wooden	911
Transformers:	
Number of	70
Kilowatt capacity	205 $\frac{1}{2}$

SERVICES RENDERED.

	Colebrook, N. H.	W. Stewarts- town, N. H.	Canaan, Vt.	Beecher Falls. Vt.
Number of consumers	184	49	50	29
Number of meters in service	154	21	30	22

ALTON ELECTRIC LIGHT & POWER COMPANY.

ALTON, N. H.

PRINCIPAL OFFICERS.

President, Oscar Duncan; Secretary and Treasurer, Raymond C. Duncan;
Vice-President, Mrs. Nellie J. Duncan, Alton, New Hampshire.

LOCALITIES SERVED.

Alton, Alton Bay and New Durham, N. H.

BALANCE SHEET.

Assets.

Cost of plant	\$9,800.00
Cash	157.00
Items receivable	500.00
Materials and supplies.....	370.76
Total	<u>\$10,827.76</u>

Liabilities.

Capital stock	\$10,000.00
Items payable	264.00
Profit	563.76
Total	<u>\$10,827.76</u>

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings.....	\$890.00
Other earnings	4,108.07
Total operating revenues.....	<u>\$4,998.07</u>
Operating expenses:	
Labor expense	\$208.45
Materials and other expense.....	2,663.20
Taxes	146.00
Total operating expenses.....	<u>3,017.65</u>
Net earnings	<u>\$1,980.42</u>
Interest	\$416.66
Other payments	1,000.00
Total deductions	<u>1,416.66</u>
Profit for year	<u>\$563.76</u>

COMMERCIAL CONSUMERS.

Number of lighting consumers metered 77, unmetered 9, total	86
Number of power consumers, metered.....	1

METERS AND TRANSFORMERS.

Total number of lighting meters.....	77
Total number of power meters.....	1
Total number of transformers.....	19
Total kilowatt capacity of transformers.....	76.5

LOAD DATA.

Connected lighting load	75 kw. (estimate)
Connected power load	10 kw.
Connected street lighting load	3 kw.
Maximum instantaneous demand.....	25 kw.
Period during which service is furnished.....	5 A. M.—12 P. M.
Schedule followed in street lighting.....	Moonlight.

AMERICAN WOOLEN COMPANY,

ENFIELD, N. H.

PRINCIPAL OFFICERS.

President, William M. Wood; Vice-President, Frederick Ayer; Secretary and Treasurer, William H. Dwelley, Jr.; Comptroller, Parry C. Wiggin; Auditor, George R. Lawton, Boston, Mass.

DIRECTORS.

William M. Wood, Andover, Mass.; Frederick Ayer, Beverly, Mass.; Francis W. Kittredge; John Hagg, Boston, Mass.; George W. Davis, Tenafly, N. J.; George E. Bullard, Boston, Mass.; George L. Shepley, Providence, R. I.; Andrew G. Pierce, Jr., New Bedford, Mass.; William H. Dwelley, Jr., Boston, Mass.

HISTORY.

Organized March 29, 1899: incorporated under the laws of the State of New Jersey.

NOTE.—The American Woollen Company is a manufacturing company, and the lighting business done at Enfield, N. H., is an insignificant part of its activities. None of its officers or directors take any active part in connection with this lighting business or receive any salary or compensation in respect to it.

LOCALITIES SERVED.

Enfield, N. H.

GENERAL BALANCE SHEET.

Assets.

Cost of plant	\$6,007.95
Items receivable	256.09
Materials and supplies.....	231.92
Loss	284.39
Total	\$6,780.35

Liabilities.

Investment	\$6,495.96
Loss	\$284.39
Total	\$6,780.35

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings.....	\$730.00
Other earnings	2,276.45
Total operating revenues	\$3,006.45

Operating expenses:

Labor expense	\$988.20
Materials and other expense.....	2,102.75
Taxes and insurance.....	199.89

Total operating expenses	\$3,290.84
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Loss	\$284.39
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COMMERCIAL CONSUMERS.

Number of lighting consumers, metered	93
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METERS AND TRANSFORMERS.

Total number of lighting meters.....	93
Total number of transformers.....	29
Total kilowatt capacity of transformers.....	79.3

LOAD DATA.

Connected lighting load	56 kw. (estimate)
Connected street lighting load	336 kw. (estimate)
"Peak load" as maximum instantaneous demand..	25 kw. (estimate)

Period during which service is furnished: 5.30 P. M. to 8.00 A. M.
Schedule followed in street lighting: Moonlight schedule.

STATISTICS OF POWER GENERATION.

Total kw. h. power purchased.....	17,901.2
Purchased from American Woolen Co., Baltic Mills.	

ASHLAND ELECTRIC LIGHT COMPANY.**ASHLAND, N. H.****PRINCIPAL OFFICERS.**

President, John B. Sullivan; Clerk, and Treasurer, Ellis G. Gammons, Ashland, N. H.

DIRECTORS.

John B. Sullivan, George E. Scribner, Willis F. Hardy, James M. Cotton, Harry R. Spaulding, Ashland, N. H.

HISTORY.

Incorporated February 2, 1889; amended March 16, 1896, and March 6, 1911, under the general law of the State of New Hampshire.

LOCALITIES SERVED.

Ashland, N. H.

GENERAL BALANCE SHEET.**Assets.**

Cost of plant.....	\$16,630.27
Cash	542.28
Items receivable	104.10
Materials and supplies.....	19.26
Total	\$17,295.91

Liabilities.

Capital stock	\$15,000.00
Bonds	650.00
Items payable	20.83
Profit	1,625.08
Total	<u>\$17,295.91</u>

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings.....	\$1,171.00
Other earnings	3,738.60
Total operating revenues.....	<u>\$4,909.60</u>
Operating expenses:	
Labor expense	\$1,480.00
Material and other expenses.....	1,103.52
Taxes	318.40
Total operating expenses.....	<u>2,901.92</u>
Net earnings	<u>\$2,007.68</u>
Interest	\$32.50
Dividends declared, 6%.....	900.00
Other payments	312.30
Total deductions	<u>1,244.80</u>
Profit for year	<u>\$762.88</u>
Profit at beginning of year.....	862.20
Profit at close of year.....	<u>\$1,625.08</u>

CENTRAL STATION EQUIPMENT.

	No.	Total capacity.
Boilers	1	100 h. p.
Steam engines	1	90 h. p.
Water wheels	1	100 h. p.
Alternating current generators.....	1	75 kw.

COMMERCIAL CONSUMERS.

Number of lighting consumers metered 89, unmetered 10, total	99
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METERS AND TRANSFORMERS.

Total number of lighting meters.....	117
Total number of transformers.....	20
Total kilowatt capacity of transformers.....	42

LOAD DATA.

Connected lighting load	72 kw.
Connected power load	5½ kw.
Connected street lighting load	6 kw.
"Peak load" as maximum instantaneous demand..	36½ kw. (estimate)

Service is continuous throughout the day of 24 hours.
Schedule followed in street lighting: all night.

STATISTICS OF POWER GENERATION.

Power is purchased from Squam Lake Lumber Co.

ASHUELOT GAS AND ELECTRIC COMPANY.

KEENE, N. H.

PRINCIPAL OFFICERS.

President, W. H. Elliot; Vice-President, W. L. Mason; Clerk, P. H. Faulkner; Treasurer and General Manager, G. M. Rossman; Superintendent, Ralph D. Smith, Keene, N. H.

DIRECTORS.

W. H. Elliott, W. L. Mason, G. M. Rossman, Walter R. Porter, P. H. Faulkner, Keene, N. H.

HISTORY.

Incorporated September 20, 1911, under the general law of the State of New Hampshire. Its property is leased to the Keene Gas and Electric Company.

LOCALITIES SERVED.

Dublin, Peterboro, Harrisville, Spofford, Chesterfield, Westmoreland, Hinsdale, Winchester, Swanzey and Marlboro.

CAPITALIZATION.

Capital stock authorized and outstanding:	
Common, 700, preferred, 700, par value \$100 per share..	\$140,000.00
Dividends declared and paid during year:	
Common 6%, preferred 5%; total.....	7,700.00
Number of stockholders, 57; number in New Hampshire, 53.	
Par value of stock held in New Hampshire.....	69,840.00
Funded debt authorized and outstanding:	
First mortgage bonds, 1912-1935, par value.....	\$140,000.00
Interest accrued and paid during year, 5%.....	4,520.40

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$660.02	
Accounts receivable	9,978.28	
Other current assets	183.06	
		\$10,821.36
Investments		3,849.83
Fixed capital—electric		305,383.38
Total		\$320,054.57

Liabilities.

Current liabilities:		
Bills payable	\$34,300.00	
Accounts payable	5,733.17	
		\$40,033.17
Funded debt		140,000.00
Capital stock—preferred		70,000.00
Capital stock—common		70,000.00
Surplus		21.40
Total		\$320,054.57

FIXED CAPITAL.

Organization	\$281.07
Construction interest	7,005.94
Structures	18,811.15
Machinery and apparatus	11,298.45
Poles and fixtures, transmission line.....	74,477.08
Transmission conductors—overhead	86,835.38
Line transformers	10,769.28
Electric meters	12,339.78
Other tangible electric capital:	
Dublin Electric Division	38,755.61
Peterboro Electric Division.....	44,809.64
Total cost of fixed capital.....	<u>\$305,383.38</u>

INCOME ACCOUNT.

Non-operating revenues:	
Rent from real estate	\$7,700.00
Non-operating expenses	<u>25.00</u>
Net income	\$7,675.00
Surplus at beginning of year.....	<u>46.40</u>
Total surplus	\$7,721.40
Dividends:	
Preferred stock, 5%; common, 6%; total.....	<u>7,700.00</u>
Surplus at close of year.....	\$21.40

METERS AND TRANSFORMERS.

	No.	Kw.
Transformers:		
Ashuelot branch	73	604
Peterboro branch	65	230½
Dublin branch	69	202½
Total	<u>207</u>	<u>1,037</u>
		Number.
Poles:		
Wooden		3,478
Iron		1
Steel towers		249

SERVICES RENDERED—ELECTRIC.

Municipality.	Street lamps in use.	Number of consumers.	Number of meters in service.
Swanzey	85	117	131
Winchester	88	161	170
Marlboro .....	..	7	8
Chesterfield .....	..	47	58
Westmoreland .....	..	13	14
Westport	11	..	..
Dublin	106	78	126
Peterboro	156	202	251

FRANK W. BALDWIN.

PITTSBURG, N. H.

LOCALITY SERVED.

Pittsburg, N. H.

GENERAL BALANCE SHEET.

Assets.

Cost of plant.....	\$3,000.00
Materials and supplies.....	25.00
Total	<hr/> \$3,025.00

Liabilities.

Investment	\$3,223.04
Loss to be transferred to F. W. Baldwin account.....	198.04
Total	<hr/> \$3,025.00

INCOME ACCOUNT.

Operating revenues	\$400.10
Operating expenses:	
Labor expense	\$404.20
Materials and other expense.....	153.94
Taxes	40.00
Total operating expenses.....	<hr/> 598.14
Net loss	<hr/> \$198.04

CENTRAL STATION EQUIPMENT.

Water wheels	50 h. p.
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COMMERCIAL CONSUMERS.

Lighting consumers	17
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METERS AND TRANSFORMERS.

Number of lighting meters	15
Number of transformers	6
Total kilowatt capacity of transformers.....	24

LOAD DATA.

Connected lighting load.....	7 or 8 kw.
"Peak load" as maximum instantaneous demand.....	8 kw.

Service is not continuous throughout day of 24 hours, average 6.00 to 12.00 P. M., 4.00 to 7.00 A. M.

BERLIN ELECTRIC LIGHT COMPANY.

BERLIN, N. H.

This report is for the nine months ending March 31, 1914, at which date the property was transferred to the Twin State Gas and Electric Co., Dover, N. H. See 3 N. H. P. S. C., page 170, and 4 N. H. P. S. C., page 8.

PRINCIPAL OFFICERS.

President, H. J. Brown; Clerk, E. K. Arvid, Portland, Me.; Treasurer, O. B. Brown; Auditor, F. W. Thompson, Berlin, N. H.

DIRECTORS.

.....
H. J. Brown, Portland, Me.; O. B. Brown, Berlin, N. H.

HISTORY.

Incorporated July 6, 1892, under the laws of the State of Maine.

CAPITAL STOCK.

Common, authorized, and outstanding:	
500 shares, par value.....	\$50,000.00
Dividends declared during year, none.	
Number of stockholders, 5; number in New Hampshire, 2.	
Par value of stock held in New Hampshire.....	200.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$945.76	
Bills receivable (notes).....	89.12	
Accounts receivable—electric }		
Accounts receivable—sundry }	55,502.32	
		\$56,537.10
Materials and supplies.....		2,975.16
Fixed capital		53,957.59
Unexpired insurance		104.12
Total		\$113,574.07

Liabilities.

Current liabilities:		
Taxes accrued	\$222.94	
Interest accrued on unfunded debt.....	120.00	
Accounts payable	126.27	
		\$469.21
Capital stock		50,000.00
Surplus		63,104.86
Total		\$113,574.07

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting	\$22,193.70	
Municipal lighting	4,226.21	
Merchandise and jobbing revenue.....	2,473.91	
Less discounts	1,674.24	
Total operating revenues.....		\$27,224.58

Operating expenses:

Production	\$2,576.47
Transmission and distribution.....	13,512.33
Insurance	645.23
General depreciation	2,209.21
Miscellaneous	2,799.55

Total operating expenses.....	\$21,742.79
Taxes	545.93
Uncollectible bills	586.33

Total revenue deductions.....	22,875.05
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Net income	\$4,349.53
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Surplus at beginning of year.....	58,755.33
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Surplus at close of year.....	\$63,104.86
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PRODUCTION AND SALES.

Kilowatt hours purchased	577,400
Kilowatt hours sold during year	548,530
Kilowatt hours unaccounted for	28,870
Per cent unaccounted for.....	5

SERVICES RENDERED.

	Berlin and Gorham.
Number of consumers	750
Number of meters in service	850

Current supplied:

Private consumers, kw. h.....	378,530
Municipal street lighting, kw. h.....	170,000

Total current supplied, kw. h.....	548,530
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BERLIN-SHELBURNE POWER COMPANY.

BERLIN, N. H.

This report is for the nine months ending March 31, 1914, at which time this company discontinued operations as a public utility.

PRINCIPAL OFFICERS.

President, Herbert J. Brown, Portland, Me.; Vice-President, O. B. Brown; Clerk, Edmund Sullivan, Berlin, N. H.; Treasurer, E. K. Arvid, Portland, Me.; Auditor, F. W. Thompson, Berlin, N. H.

DIRECTORS.

H. J. Brown, Portland, Me.; O. B. Brown, W. R. Brown, Berlin, N. H.; D. P. Brown, LaTuque, P. Q.; Edmund Sullivan, Berlin, N. H.

HISTORY.

Incorporated August 8, 1906, under the laws of the State of Maine.

CAPITAL STOCK.

Authorized and outstanding:

Common, 500 shares, par value \$100 per share.....	\$50,000.00
Dividends declared during year, none.	
Number of stockholders, 6; number in New Hampshire, 3.	
Par value of shares held in New Hampshire.....	\$300.00

INVESTMENTS.

Berlin Electric Light Company stock.....	Par value. \$49,600.00
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GENERAL BALANCE SHEET.

Assets.

Cash and current assets:	
Accounts receivable	\$11,926.38
Investments	49,600.00
Fixed capital	279,833.62
Total	<hr/> \$341,360.00

Liabilities.

Current liabilities:		
Bills payable	\$217,172.81	
Accounts payable	9,367.39	
Interest accrued	5,429.40	
Taxes accrued	847.41	
	<hr/>	\$232,817.01
Reserve for depreciation.....		58,340.60
Capital stock		50,000.00
Surplus		202.39
Total		<hr/> \$341,360.00

FIXED CAPITAL.

Land	\$56,300.00
Structures	143,330.00
Machinery and apparatus.....	65,890.00
Poles and fixtures.....	7,480.00
Line transformers	4,070.00
Miscellaneous expenditures during construction.....	2,763.62
Total cost of fixed capital.....	<hr/> \$279,833.62
Less reserve for depreciation.....	52,415.00
Total (net) value of fixed capital.....	<hr/> \$227,418.62

INCOME ACCOUNT.

Operating revenues:		
Commercial power		\$33,002.80
Operating expenses:		
Production	\$9,183.57	
Transmission and distribution.....	1,010.92	
Insurance	451.45	
General depreciation	5,925.60	
Miscellaneous	731.55	
Total operating expenses.....	<hr/> \$17,303.09	
Taxes	2,172.03	
		<hr/> 19,475.12
Gross operating income.....		\$13,527.68
Deductions from gross income:		
Interest on unfunded debt.....		8,312.46
Net income		<hr/> \$5,215.22
Deficit at beginning of year.....		5,012.83
Surplus at close of year.....		<hr/> \$202.39

PRODUCTION AND SALES.

Kilowatt hours generated,	8,000,882
Kilowatt hours sold during year	7,176,446
Kilowatt hours unaccounted for	824,436
Per cent unaccounted for.....	10.30

SERVICES RENDERED.

	Berlin, Gorham and Shelburne.
Number of consumers.....	2
Current supplied:	
Private consumers, kw. h.....	6,599,046
Other public service corporations.....	577,400
Total current supplied, kw. h.....	7,176,446

MISCELLANEOUS STATISTICS.

Miles of overhead circuit, 11; load, 1600 kw.
Poles: wooden poles, 460.

BERWICK & SALMON FALLS ELECTRIC COMPANY.

DOVER, N. H.

PRINCIPAL OFFICERS.

President, I. L. Meloan, Dover, N. H.; Clerk, D. W. Snow, Portland, Me.; Treasurer, W. G. Meloan, Dover, N. H.

DIRECTORS.

H. H. Flagg, J. F. Reilly, New York, N. Y.; I. L. Meloan, Dover, N. H.

HISTORY.

A stock company organized November 18, 1889, under the laws of the State of Maine.

LOCALITIES SERVED.

South Berwick and Berwick, Maine; Salmon Falls and Rollinsford, N. H.

CAPITALIZATION.

Capital stock, common, par value, \$25 per share:	
Authorized 500 shares, outstanding 98; total par value..	\$9,800.00
Dividends declared during year, none.	
Number of stockholders, 6; number in New Hampshire, 1.	
Total par value of capital stock held in New Hampshire	50.00
Funded debt, authorized and outstanding:	
Mortgage bonds, 1913-1953, par value.....	37,000.00
Interest accrued and paid during year.....	1,387.54

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$523.91
Accounts receivable	2,334.93

Other current assets:		
Twin State earnings.....	\$2,031.20	\$4,890.04
Fixed capital		53,122.56
Total		\$58,012.60

Liabilities.

Current liabilities:		
Taxes accrued	\$45.21	
Accounts payable	1,271.72	
Earnings payable: Twin State Gas & Elec- tric Co.	6,010.54	\$7,327.47
Funded debt		37,000.00
Optional reserves		500.00
Capital stock—common		9,800.00
Reserve for doubtful accounts		72.95
Surplus		3,312.18
Total		\$58,012.60

INCOME ACCOUNT.

Operating revenues:		
Electric—		
Commercial lighting	\$5,113.49	
Commercial power	2,085.66	
Municipal lighting	3,262.13	
Other operating revenues — wholesale power	2,166.48	
Total operating revenues.....		\$12,627.76
Operating expenses:		
Electric—		
Production	\$3,611.94	
Transmission and distribution.....	1,190.72	
Insurance	473.63	
Miscellaneous	2,261.54	
Total operating expenses.....	\$7,537.83	
Taxes	417.09	
Total revenue deductions.....		7,954.92
Gross operating income.....		\$4,672.84
Deductions from gross income:		
Interest on funded debt.....		1,387.54
Net income		\$3,285.30
Surplus at beginning of year.....		4,006.22
Total surplus		\$7,291.52
Net adjustments during year (debit), earnings payable to Twin State Gas & Electric Co.....		6,010.54
Adjusted balance		\$1,280.98
Twin State Gas & Electric Co., earning account.....		2,031.20
Surplus at close of year.....		\$3,312.18

BETHLEHEM ELECTRIC LIGHT COMPANY.

BERLIN, N. H.

PRINCIPAL OFFICERS.

President, A. W. Fuller, Gorham, N. H.; Vice-President, (Mrs.) Lillian B. Eastman; Treasurer, M. H. Taylor, Berlin, N. H.; Manager, George H. Turner, Bethlehem, N. H.

DIRECTORS.

A. W. Fuller, Gorham, N. H.; Lillian B. Eastman, M. J. Taylor, Berlin, N. H.

GENERAL BALANCE SHEET.

<i>Assets.</i>	
Cost of plant.....	\$77,000.00
Cash	27.18
Total	<hr/> \$77,027.18
<i>Liabilities.</i>	
Capital stock	\$50,000.00
Bonds	9,000.00
Items payable	13,000.00
Profit	5,027.18
Total	<hr/> \$77,027.18

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings.....	\$1,402.00
Other earnings	11,107.44
Total earnings from operation.....	<hr/> \$12,509.44
Operating expenses:	
Labor expense	\$3,427.26
Materials and other expense.....	6,661.47
Taxes	416.67
Total operating expenses.....	<hr/> 10,505.40
Net earnings	\$2,004.04
Deductions (interest)	1,100.00
Profit for year.....	<hr/> \$904.04
Profit at beginning of year.....	4,123.14
Profit at close of year.....	<hr/> \$5,027.18

CENTRAL STATION EQUIPMENT.

	No.	Total capacity.
Boilers	2	250 h. p.
Steam engines	1	250 h. p.
Water wheels	2	350 h. p.
Alternating current generators.....	2	225 h. p.

COMMERCIAL CONSUMERS.

Lighting consumers	217
Power consumers	3

METERS AND TRANSFORMERS.

Total number of lighting meters	228
Total number of power meters	2
Total number of transformers	52
Total kilowatt capacity of transformers.....	281

LOAD DATA.

Connected lighting load	263 kw.
Connected power load	18 kw.
Connected street lighting load.....	6½ kw.
"Peak load" as maximum instantaneous demand.....	225 kw.
Service is continuous throughout the day of 24 hours.	
Schedule followed in street lighting: all night.	

BRADFORD ELECTRIC LIGHTING COMPANY.

BRADFORD, VT.

PRINCIPAL OFFICERS.

President, C. A. Prouty, Newport, Vt.; Vice-President, C. H. Curtis, Clerk; M. E. Curtis, Bradford, Vt.; Treasurer, M. C. Brigham; General Manager, C. A. Prouty, Newport, Vt.

DIRECTORS.

C. A. Prouty, M. C. Brigham, Ward Prouty, Newport, Vt.; C. H. Curtis, M. E. Curtis, Bradford, Vt.

HISTORY.

Organized May, 1897, under the laws of the State of Vermont.

LOCALITIES SERVED.

Bradford, Fairlee, Newbury, and South Newbury, Vt.; North Haverhill, Haverhill, Piermont, and Orford, N. H.

CAPITALIZATION.

Capital stock, authorized and outstanding:	
Common, 500 shares, par value \$100 per share.....	\$50,000.00
Dividends declared and paid during year.....	2,000.00
Number of stockholders, 7; number in New Hampshire, 0.	
Funded debt, authorized and outstanding:	
Mortgage bonds, 1909-1929, par value.....	25,000.00
Interest, accrued and paid during year, 6%.....	1,500.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$208.68
Materials and supplies.....	258.80
Special deposits	518.49
Fixed capital	96,148.19
Total	\$97,134.16

Liabilities.

Current liabilities	\$12,000.00
Funded debt	25,000.00
Reserve for depreciation.....	2,000.00
Capital stock	50,000.00
Surplus	8,134.16
Total	<u>\$97,134.16</u>

— **FIXED CAPITAL.**

Land, including water power.....	\$21,500.00
Structures, including dam.....	20,000.00
Machinery and apparatus.....	15,039.84
Poles and fixtures.....	7,064.55
Distribution system—overhead	12,737.01
Electric services	3,515.22
Line transformers	8,905.31
Electric meters	4,379.74
Arc lamps and glower lamps.....	3,000.00
Miscellaneous expenditures during construction.....	6.52
Total cost of fixed capital.....	<u>\$96,148.19</u>

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting		\$8,364.88
Commercial power		1,090.88
Municipal lighting		2,897.21
Total operating revenues.....		<u>\$12,352.97</u>
Operating expenses:		
Production	\$1,931.84	
Transmission and distribution.....	2,378.13	
Insurance	122.58	
General depreciation	2,000.00	
Miscellaneous	39.52	
Office and general.....	1,016.16	
Total operating expenses.....	<u>\$7,488.23</u>	
Taxes	1,208.27	
Total revenue deductions.....		<u>8,696.50</u>
Gross operating income.....		<u>\$3,656.47</u>
Non-operating revenues:		
Rent from real estate.....	\$1,360.42	
Interest on bank deposits.....	27.00	
Income from investments.....	48.82	
Total non-operating revenues.....		<u>1,436.24</u>
Gross income		<u>\$5,092.71</u>
Deductions from gross income:		
Interest on funded debt	\$1,500.00	
Interest on unfunded debt	611.00	
Total deductions from gross income.....		<u>2,111.00</u>
Net income		<u>\$2,981.71</u>
Dividends		<u>3,000.00</u>
Loss for year.....		<u>\$18.29</u>

SERVICES RENDERED.

	Number of consumers.	Number of of meters in service.
Bradford	150	140
Fairlee and Orford.....	65	60
Newbury	45	42
Piermont	29	34
North Haverhill	42	34
Haverhill	34	34
Newbury Road	13	12

MISCELLANEOUS STATISTICS.

Meters: 4, 5 lt.; 451, 10 lt.; 10, 20 lt.; 4, 80 lt.
 Street lamps: 264.
 Type of street lamps: multiple incandescent.
 Candlepower of street lamps: 40 watt.
 Period during which lamps burn: all night.

BRADFORD LIGHT AND POWER COMPANY.

BRADFORD, N. H.

(C. E. Hadley, Owner)

LOCALITY SERVED.

Bradford.

GENERAL BALANCE SHEET.

Assets.

Cost of plant.....	\$10,000.00
Cash	1,343.00
Total	\$11,343.00

Liabilities.

Investment	\$10,000.00
Profit	1,343.00
Total	\$11,343.00

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings.....	\$420.00
Other earnings	1,074.00
Total operating revenues.....	\$1,494.00
Operating expenses:	
Labor expense	\$100.00
Taxes	51.00
Total operating expenses.....	151.00
Net earnings	\$1,343.00

CENTRAL STATION EQUIPMENT.

Boilers	1	100 h. p.
Steam engines	1	100 h. p.
Water wheels	1	77 h. p.
Direct current generators.....	1	3 kw.
Alternating current generators.....	1	75 kw.

COMMERCIAL CONSUMERS.

Lighting consumers, unmetered, 52.

METERS AND TRANSFORMERS.

Number of transformers..... 13
Total kilowatt capacity of transformers..... 65 kw. (estimated)

LOAD DATA.

Service is not continuous throughout the day of 24 hours.
Period during which service is furnished: from dusk until midnight.
Schedule followed in street lighting: from dusk till midnight.

BRISTOL ELECTRIC LIGHT COMPANY.

BRISTOL, N. H.

PRINCIPAL OFFICERS.

President, E. B. Emerson, State Farm, Mass.; Vice-President, M. D. Musgrove, Treasurer and General Manager, Geo. A. Emerson, Auditor, W. H. Marston, Bristol, N. H.

DIRECTORS.

M. D. Musgrove, Geo. A. Emerson, Jos. A. Emerson, Bristol, N. H.; E. B. Emerson, H. L. Emerson, State Farm, Mass.; Geo. E. Emerson, South Weymouth, Mass.; J. D. Emerson, East Billerica, Mass.

HISTORY.

Incorporated November 4, 1889. Amended April 6, 1900; incorporated under the general laws of the State of New Hampshire.

LOCALITIES SERVED.

Bristol, New Hampton, Bridgewater and Alexandria, N. H.

GENERAL BALANCE SHEET.

Assets.

Cost of plant	\$44,999.36
Cash	2,258.61
Items receivable	1,704.79
Materials and supplies.....	581.16
Total	\$49,543.92

Liabilities.

Capital stock	\$16,000.00
Depreciation	1,600.00
Items payable	9,269.37
Profit	22,674.55
Total	\$49,543.92

INCOME ACCOUNT.

Operating revenues:*	
Municipal street lighting earnings.....	\$2,181.99
Other earnings	6,848.61
Total operating revenues.....	\$9,030.60

*The revenues here reported are for the period from April 1, 1913, to June 30, 1914, but the expenses are for the fiscal year.

Operating expenses:

Labor expense	\$3,068.00
Materials and other expense.....	2,377.20
Taxes	170.12

Total operating expenses.....	\$5,615.32
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Net earnings	\$3,415.28
Interest	\$439.78
Other payments	417.80
Total deductions	857.58

Profit for year	\$2,557.70
Profit at beginning of year.....	19,812.27

CENTRAL STATION EQUIPMENT.

Internal combustion engines, 1.....	50 h.p.
Water wheels, 1 pr. twin turbines.....	150 h.p.
Direct current generators, 1.....	3 kw.
Alternating current generators, 2	150 kw. each

COMMERCIAL CONSUMERS.

Number of lighting consumers, metered.....	201
Number of power consumers, metered.....	7

METERS AND TRANSFORMERS.

Total number of lighting meters.....	200
Total number of power meters.....	2
Total number of transformers.....	106
Total kilowatt capacity of transformers.....	178

CAMPTON ELECTRIC LIGHT COMPANY.

CAMPTON, N. H.

(Moody C. Dole, Owner.)

NOTE.—Furnishing electricity is not the principal business of this operator. The utility is operated in connection with other business.

LOCALITY SERVED.

Campton, N. H.

FIXED CAPITAL.

Report of electric plant and operations:

Fixed capital	\$3,000.00
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INCOME ACCOUNT.

Operating revenues:

Municipal street lighting.....	\$300.00
Other earnings	383.14

Total operating revenues	\$683.14
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Operating expenses:

Labor expense	\$552.50
Materials and other expense.....	10.00
Taxes	22.00

Total operating expenses.....	\$584.50
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Net earnings	\$98.64
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COMMERCIAL CONSUMERS.

Number of lighting consumers, metered, 15; unmetered, 9; total, 24.

METERS AND TRANSFORMERS.

Total number of lighting meters.....	15
Total number of transformers	14
Total kilowatt capacity of transformers.....	20

CANAAN LIGHT, HEAT & POWER COMPANY.

CANAAN, N. H.

Company did not operate during the year. Property transferred to Canaan Electric Company. See 4 N. H. P. S. C. Rep. 284.

CASCADE ELECTRIC LIGHT & POWER COMPANY.

CASCADE LIGHT AND POWER COMPANY.

The properties of these two companies were on March 31, 1914, transferred to the Twin State Gas and Electric Company, Dover, N. H. The approval of the Public Service Commission to this transfer was given by its Order No. 208, dated September 9, 1913. See 3 N. H. P. S. C. Rep. 170 and 4 N. H. P. S. C. Rep. 4.

CENTER HARBOR ELECTRIC COMPANY.

(Percy Kelley, Proprietor.)

CENTRE HARBOR, N. H.

LOCALITY SERVED.

Centre Harbor.

NOTE.—Furnishing electricity is not the principal business of this operator. The utility is operated in connection with lumber business.

BALANCE SHEET.

Assets.

Cost of plant	\$2,350.00
Cash	547.00
Total	\$2,897.00

Liabilities.

Investment	\$2,350.00
Profit	547.00
Total	<u>\$2,897.00</u>

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings	\$394.00
Other earnings	530.00
Total operating revenues	<u>\$924.00</u>
Operating expenses:	
Labor expense	\$365.00
Taxes	12.00
Total operating expenses	<u>377.00</u>
Net earnings	<u>\$547.00</u>

CENTRAL STATION EQUIPMENT.

Water wheel	35 h. p.
Alternating current generator	30 kw.

COMMERCIAL CONSUMERS.

Number of lighting consumers: metered 16, unmetered 3; total	19
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METERS AND TRANSFORMERS.

Total number of lighting meters	16
Total number of transformers	7
Total kilowatt capacity of transformers	14

LOAD DATA.

Connected lighting load	16 kw.
Connected power load	1½ kw.
Period during which service is furnished: six hours after sunset.	
Schedule followed in street lighting: From time plant is started till shut down.	

THE CENTRAL NEW HAMPSHIRE POWER COMPANY OF NEW HAMPSHIRE.

WEBSTER, N. H.

LOCATION OF OFFICE.

Concord, N. H. (Martin & Howe, Lawyers).

PRINCIPAL OFFICERS.

President, Dennison Cowles, Brattleboro, Vt.; Clerk, Nathaniel E. Martin, Concord, N. H.; Treasurer, Frederick L. Houghton, Brattleboro, Vt.

DIRECTORS.

Nathaniel E. Martin, Concord, N. H.; Dennison Cowles and Frederick L. Houghton, Brattleboro, Vt.

HISTORY.

Incorporated September 19, 1910, under the general law of the State of New Hampshire.

NOTE.—This is not an operating company. The company owns property situated in the town of Webster.

CHOCORUA ELECTRIC LIGHT PLANT.

CHOCORUA, N. H.

This plant was incidental to the main purpose of the Chocorua Company, which was to operate a hotel. It was built primarily to provide light for the hotel. It is estimated that the plant cost about \$35,000. The Chocorua Company was placed in the hands of a receiver during the year. Because of the inadequate accounts it was impossible to secure a report from the trustee in bankruptcy. On September 21, 1914, the plant was turned over to certain of the creditors and is now being operated by them.

CLAREMONT POWER COMPANY.

CLAREMONT, N. H.

PRINCIPAL OFFICERS.

President, Joseph B. Taylor, Vice-President, Lucien H. Tyng, New York City; Clerk and General Manager, R. W. Berliner, Claremont, N. H.; Treasurer, J. A. Fusselman, New York City; Assistant Treasurer, L. A. McVeigh, Superintendent, H. E. Aldrich, Claremont, N. H.

DIRECTORS.

Joseph B. Taylor, Lucien H. Tyng, W. S. Barstow, O. C. Swenson, New York City; F. H. Foster, Claremont, N. H.

HISTORY.

Incorporated March 13, 1907, under special act of the State of New Hampshire.

CAPITALIZATION.

Capital stock, authorized and outstanding:	
Preferred, 1000 shares, par value \$100 each.....	\$100,000.00
Common, 6000 shares, par value \$100 each.....	600,000.00
Dividends declared during year, none.	
Number of stockholders, 6; number in New Hampshire, 1.	
Par value of stock held in New Hampshire.....	100.00
Funded debt, authorized and outstanding:	
First mortgage bonds, 1907-1937, par value.....	400,000.00
5 year notes, 1910-1915, authorized.....	100,000.00
5 year notes, 1910-1915, outstanding.....	85,000.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$2,261.12
Accounts receivable, electric	11,047.92
Accounts receivable, sundry	161.07
	<hr/>
	\$13,470.11

Materials and supplies.....	\$4,909.91
Sinking funds	6,068.76
Fixed capital, electric.....	934,197.23
Prepayments	576.97
Suspense	13,209.66
Deficit	262,595.69
Total	<u>\$1,235,028.33</u>

Liabilities.

Current liabilities:		
Taxes accrued	\$902.40	
Interest accrued on funded debt.....	5,000.01	
Interest accrued on unfunded debt.....	252.78	
Bills payable	31,709.58	
Accounts payable	4,995.48	
Coupon interest matured.....	5,000.00	
Matured interest on notes payable.....	1,268.08	
		<u>\$49,128.33</u>
Funded debt		485,000.00
Optional reserves for liability insurance.....		900.00
Capital stock—preferred		100,000.00
Capital stock—common		600,000.00
Total		<u>\$1,235,028.33</u>

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting	\$19,656.09	
Commercial power	44,092.51	
Municipal lighting	5,901.96	
Merchandise and jobbing revenue.....	212.76	
Other operating revenues.....	627.38	
Total operating revenues.....		<u>\$70,490.70</u>
Operating expenses:		
Production	\$42,053.78	
Transmission and distribution.....	5,072.89	
Insurance	2,106.02	
Miscellaneous	10,897.08	
Total operating expenses.....		<u>60,129.77</u>
Gross income		10,360.93
Deductions from income:		
Taxes	\$2,219.12	
Interest on bonds	10,250.01	
Interest on notes payable	3,672.94	
Total deductions		<u>16,142.07</u>
Deficit		\$5,781.14
Profit and loss debit balance*.....		273,123.89
Surplus previous year.....		16,309.34
Deficit at close of year.....		<u>\$262,595.69</u>

PRODUCTION AND SALES.

Kilowatt hours generated	2,003,227
Kilowatt hours purchased	2,073,767
Delivered at switchboard.....	4,076,994
Sold during year.....	3,695,583
Used by respondent.....	36,750
Unaccounted for	344,661
Per cent unaccounted for.....	8.5%

*Explanations of this adjustment entry were made by correspondence, which is in the files of the Public Service Commission.

SERVICES RENDERED.		
	Claremont.	Cavendish.
Number of consumers.....	809	
Current supplied:	kw. h.	kw. h.
Private consumers	3,008,091	
Municipal street lighting.....	127,840	
Other public service corporations.....	396,530	163,122
Used by respondent.....	35,950	800

CLOUTMAN GAS & ELECTRIC COMPANY.

FARMINGTON, N. H.

PRINCIPAL OFFICERS.

President and General Manager, W. D. Allen; Treasurer, Nellie A. Allen, Farmington, N. H.

DIRECTORS.

W. D. Allen, Nellie A. Allen, John F. Cloutman, Farmington, N. H.

HISTORY.

Incorporated April 18, 1908, under the general law of the State of New Hampshire.

LOCALITY SERVED.

Farmington, N. H.

CAPITALIZATION.

Capital stock, common, authorized and outstanding:	
600 shares, par value 25 each, total.....	\$15,000.00
Dividends declared during year, none.	
Number of stockholders, 5; number in New Hampshire, 5.	
Par value of stock held in New Hampshire.....	15,000.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$924.19	
Accounts receivable—electric	2,290.15	
Accounts receivable—sundry	420.48	
		\$3,634.82
Materials and supplies.....		953.87
Fixed capital		25,713.00
Insurance		618.00
Total		\$30,919.69

Liabilities.

Current liabilities:		
Taxes accrued	\$463.76	
Accounts payable	1,889.45	
		\$2,353.21
Reserve for depreciation.....		1,502.41
Capital stock, preferred.....		15,000.00
Surplus		12,064.07
Total		\$30,919.69

FIXED CAPITAL.

Land	{	
Structures	}	\$4,487.13
Machinery and apparatus.....		12,540.82
Poles and fixtures.....		1,785.18
Transmission conductors—overhead		565.12
Distribution system—overhead		888.03
Electric services		777.01
Line transformers		1,263.49
Electric meters		1,390.10
Municipal street lighting system.....		1,929.12
Other tangible electric capital.....		87.00
Total cost of fixed capital.....		\$25,713.00
Less reserve for depreciation.....		1,502.41
Total (net) value of fixed capital.....		\$24,210.59

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting	\$8,069.89	
Commercial power	5,082.59	
Municipal lighting	2,315.00	
Total operating revenues.....		\$15,467.48
Operating expenses:		
Production	\$4,938.05	
Transmission and distribution.....	196.94	
Insurance	752.58	
General depreciation	1,502.41	
Miscellaneous	5,838.22	
Total operating expenses.....		\$13,228.20
Taxes	463.76	
Uncollectible bills	8.03	
Total revenue deductions.....		13,699.99
Net income		\$1,767.49
Surplus at beginning of year		10,296.58
Surplus at close of year		\$12,064.07

ELECTRIC SERVICES RENDERED (Estimate).

Number of consumers	206
Number of meters in service.....	219
Current supplied:	kw. h.
Private consumers	250,000
Municipal street lighting.....	25,000
Other municipal service	40,000
Other public service corporations.....	40,000
Total current supplied.....	355,000

CONCORD ELECTRIC COMPANY.

CONCORD, N. H.

PRINCIPAL OFFICERS.

President, Allen Hollis, Concord, N. H.; First Vice-President, Albert B. Tenney; Second Vice-President, D. Edgar Manson; Clerk, Horace P. Wood; Treasurer, Elihu A. Bradley; Auditor and Assistant Treasurer, Herbert A. Gidney; General Managers, Charles H. Tenney & Co., Boston, Mass.; Manager, Levin J. Chase, Concord, N. H.

DIRECTORS.

Allen Hollis, Concord, N. H.; Albert B. Tenney, Boston, Mass.; Charles H. Tenney, Springfield, Mass.; Horace P. Wood, Boston, Mass.; Samuel A. York, Herbert C. Warren, Edward M. Bradley, New Haven, Conn.; Josiah E. Fernald, Concord, N. H.; Bernan E. Helme, Kingston, R. I.; William F. Thayer, Concord, N. H.

HISTORY.

Incorporated May 29, 1901. Amended: July 1, 1901; October 9, 1905; August 31, 1906; April 28, 1911, under general laws of the State of New Hampshire. Ratified by Special Act of Legislature, February 28, 1907.

LOCALITY SERVED.

Concord, N. H.

CAPITALIZATION.

Capital stock, authorized and outstanding:	
Common, 4,500 shares, par value \$100 each.....	\$450,000.00
Preferred, 2,250 shares, par value \$100 each.....	225,000.00
Dividends declared and paid during year, 6%.....	40,500.00
Number of stockholders, 173 common, 160 preferred.	
Number in New Hampshire, 35 common, 23 preferred.	
Par value of stock held in New Hampshire.....	71,800.00
Funded debt, authorized and outstanding:	
First mortgage bonds, 1901-1931—par value.....	335,000.00
Interest accrued and paid during year.....	15,843.98

INVESTMENTS.

Black River Water Power Development, actual cost.....	\$8,382.58
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GENERAL BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$15,052.84
Accounts receivable—electric	14,430.90
Accounts receivable—sundry	1,536.24
Interest and dividends receivable.....	250.00
Other accounts receivable.....	282.08
	<hr/>
	\$31,552.06
Materials and supplies.....	12,092.41
Investments	8,382.58
Fixed capital—electric	1,068,564.97
Fixed capital—other departments	11,947.76
Prepayments	2,877.69
Unextinguished discount on securities.....	2,458.80
	<hr/>
Total	\$1,137,876.27

Liabilities.

Current liabilities:		
Taxes accrued	\$190.70	
Bills payable (promissory notes).....	82,500.00	
Consumers' deposits	90.00	
Accounts payable	3,299.13	
Payroll	161.95	
Insurance accrued	88.00	
		<hr/>
		\$86,329.78
Funded debt		335,000.00
Optional reserves		352.10
Capital stock—preferred		225,000.00
Capital stock—common		450,000.00
Surplus		41,194.39
		<hr/>
Total		\$1,137,876.27

FIXED CAPITAL.

Land	\$46,099.15
Structures	133,060.73
Machinery and apparatus.....	722,068.30
Poles and fixtures*	
Distribution system—overhead	89,092.88
Electric services*	
Line transformers	33,893.30
Electric meters	25,627.70
Arc lamps and glowler lamps.....	7,363.18
Municipal street lighting system*	
General equipment	7,825.03
Miscellaneous expenditures during construction.....	3,534.70
	<hr/>
Total cost of fixed capital.....	\$1,068,564.97

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting	\$57,398.23	
Commercial power	40,803.89	
Municipal lighting	20,565.01	
Merchandise and jobbing revenue, electric (net)	695.59	
Other operating revenues—electric.....	23.30	
	<hr/>	
Total operating revenues.....		\$119,486.02
Operating expenses:		
Production	\$13,163.92	
Transmission and distribution.....	13,148.68	
Insurance	2,453.77	
Miscellaneous	17,518.33	
	<hr/>	
Total operating expenses.....	\$46,284.70	
Taxes	10,905.80	
Uncollectible bills	235.62	
	<hr/>	
Total revenue deductions.....		57,426.12
		<hr/>
Gross operating income.....		\$62,059.90
Non-operating revenues:		
Rent from real estate.....	\$397.02	
Interest on bank deposits.....	111.87	
Income from investments.....	250.00	
Other non-operating revenues.....	209.68	
	<hr/>	
Total non-operating revenues.....		968.57
		<hr/>
Gross income		\$63,028.47

*Included with Distribution system—overhead.

Deductions from gross income:	
Interest on funded debt	\$15,843.98
Interest on unfunded debt	5,521.63
Total deductions from gross income.....	\$21,365.61
Net income	\$41,662.86
Surplus at beginning of year.....	47,080.10
Total surplus	\$88,742.96
Net adjustments during year, Cr.....	7,048.57
Adjusted balance	\$81,694.39
Dividends on preferred stock, 6%.....	\$13,500.00
Dividends on common stock, 6%.....	27,000.00
Total dividends	40,500.00
Surplus at close of year.....	\$41,194.39

PRODUCTION AND SALES.

Kilowatt hours generated	4,179,839
Kilowatt hours delivered at switchboard.....	4,179,839
Kilowatt hours sold during year	3,168,096
Kilowatt hours used by respondent.....	52,646
Kilowatt hours unaccounted for	959,097
Per cent unaccounted for.....	23
Maximum load, January 17, 1914, kws.....	1,370
Minimum load, July 6, 1914, kws.....	40

SERVICES RENDERED.

Number of consumers	1,654
Number of meters in service.....	1,358
Connected load	3,536
Current supplied:	kw. h.
Private consumers	2,495,369
Municipal street lighting.....	363,040
Other municipal service.....	23,267
Other public service corporations.....	286,420
Used by respondent.....	52,646
Total current supplied.....	3,220,742

CONNECTICUT RIVER POWER COMPANY OF NEW HAMPSHIRE.

50 CONGRESS STREET, BOSTON, MASS.

PRINCIPAL OFFICERS.

President, Charles A. Harris; Vice-President, Clarke C. Fitts, Brattleboro, Vt.; Clerk, Edelbert J. Temple, Hinsdale, N. H.; Treasurer, William W. Brooks, Brookline, Mass.; Comptroller, S. C. Moore; General Manager, E. L. West, Worcester, Mass.

DIRECTORS.

Charles A. Harris, Clarke C. Fitts, Harold E. Whitney, Brattleboro, Vt.; Edelbert J. Temple, Hinsdale, N. H.; William W. Brooks, Brookline, Mass.

HISTORY.

Organized under laws of the State of Vermont. See Act 201, 1902; Act 209, 1904; Act 340, 1906.

Incorporated under the laws of the State of New Hampshire. Chapter 306, approved March 31, 1903; amended by chapter 244, approved March 14, 1907.

LOCALITIES SERVED.

This company furnishes power to the Keene Gas & Electric Company, over whose transmission line the current is taken from the power house at Hinsdale. The company also has lines in the town of Winchester.

CAPITALIZATION.

Capital stock, authorized and outstanding:	
Common, 15,000 shares, par value \$100 each,	\$1,500,000.00
Preferred, 5,000 shares, par value \$100 each,	500,000.00
Dividends declared during year: common, 4%; preferred 6%	90,000.00
Funded debt, authorized and outstanding:	
First mortgage, 5% gold, sinking fund bonds, 1907-1937	1,958,000.00
Dividends accrued and paid during year, 5%.....	98,508.33

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$11,217.49
Bills receivable (notes).....	12,466.76
Accounts receivable—electric	89,393.10
Accounts receivable—sundry	403.32
	<hr/>
	\$110,480.67
Sinking funds	131.78
Special deposits	7,200.00
Fixed capital	4,417,895.40
Construction work in progress.....	24,389.16
Prepayments	9,216.84
	<hr/>
Total	\$4,569,313.85

Liabilities.

Current liabilities:	
Interest accrued on funded debt	\$8,158.33
Interest accrued on unfunded debt	5,089.63
Bills payable (promissory notes).....	47,000.00
Accounts payable	27,245.76
Dividends payable	2,500.00
	<hr/>
	\$89,993.72
Funded debt	1,958,000.00
Sinking fund reserves.....	45,111.56
Optional reserves	5,051.48
Capital stock—preferred	500,000.00
Capital stock—common	1,500,000.00
Five-year coupon notes (Due 1915).....	251,000.00
Surplus	220,157.09
	<hr/>
Total	\$4,569,313.85

SINKING FUND.

Sinking fund with trustee for reduction of bonds in accordance with provision of the mortgage.....	\$131.78
Payment of bond interest.....	7,200.00

INCOME ACCOUNT.

Operating revenues:	
Commercial power	\$354,397.26
	<hr/>
Total operating revenues.....	\$354,397.26

Operating expenses:

Production	\$39,608.57
Transmission and distribution.....	2,237.51
Insurance	1,775.00
Miscellaneous	18,236.22

Total operating expenses.....	\$61,857.30
Taxes	19,350.00

Total revenue deductions..... \$81,207.30

Gross operating income..... \$273,189.96

Non-operating revenues:

Rent from real estate.....	\$1,138.41
Interest on bank deposits.....	610.73
Other non-operating revenues.....	294.13

Net non-operating revenues..... 2,043.27

Gross income \$275,233.23

Deductions from gross income:

Interest on funded debt	\$98,508.33
Interest on unfunded debt	17,804.72
Amortization of discount on bonds.....	3,580.00
Sinking fund requirements.....	15,807.42

Total deductions from gross income,..... 135,700.47

Net income \$139,532.76

Surplus at beginning of year..... 170,624.33

Total surplus \$310,157.09

Dividends on preferred stock, 6%.....	\$30,000.00
Dividends on common stock, 4%.....	60,000.00

Total dividends 90,000.00

Surplus at close of year..... \$220,157.09

PRODUCTION AND SALES.

Kilowatt hours generated	57,127,900
Kilowatt hours purchased	4,960
Kilowatt hours delivered at switchboard.....	57,132,860
Kilowatt hours sold during year.....	56,537,684
Kilowatt hours used by respondent.....	188,648
Kilowatt hours unaccounted for	406,528
Per cent unaccounted for.....	.71
Maximum load 21,500 kw., December 1, 1913.	
Minimum load, 300 kw., July 6, 1913.	

SERVICES RENDERED.

	Brattleboro, Vt.	Vernon, Vt.	Keene, N. H.	Warwick, Mass.
Number of consumers	4	1	1	1
Number of meters in service.	4	1	4	1
Connected load, estimated, kilowatts	1,700	15	1,000	50,000
Current supplied, kilowatt hours:				
Private consumers	2,396,950	.....	.....	.....
Other public service cor- porations	1,093,410	3,860	1,768,262	51,275,202
Used by respondent.....	.....	188,648	.....	.....
Total current supplied...	3,490,360	192,508	1,768,262	51,275,202

CONTOOCCOOK ELECTRIC LIGHT COMPANY.

CONTOOCCOOK, N. H.

PRINCIPAL OFFICERS.

President and General Manager, Horace J. Davis; Secretary and Treasurer, John A. Fuller, Contoocook, N. H.

DIRECTORS.

Horace J. Davis, Daniel J. Fisk, Stephen E. Morrill, Arthur C. Huntoon, Charles S. Rowell, Contoocook, N. H.

HISTORY.

Incorporated November 5, 1895; amended, November 24, 1896; September 12, 1899; January 24, 1900, under the general law of the State of New Hampshire.

LOCALITY SERVED.

Hopkinton and Warner, N. H.

GENERAL BALANCE SHEET.

Assets.

Cost of plant.....	\$23,494.75
Cash	1,388.04
Treasury stock	1,000.00
Special fund (Savings Bank).....	14,211.26
Materials and supplies.....	200.00
Total	<hr/> \$40,294.05

Liabilities.

Capital stock	\$24,000.00
Profit	16,294.05
Total	<hr/> \$40,294.05

INCOME ACCOUNT.

Operating revenues:		
Municipal street lighting earnings.....	\$1,755.50	
Other earnings	4,713.46	
Total operating revenues.....		<hr/> \$6,468.96
Operating expenses:		
Labor expense	\$1,449.68	
Materials and other expense.....	1,195.91	
Taxes	240.75	
Total operating expenses.....		<hr/> 2,886.34
Net earnings		<hr/> \$3,582.62
Interest		1,440.00
Profit for year.....		<hr/> \$2,142.62
Profit at beginning of year.....		14,151.43
Profit at close of year.....		<hr/> \$16,294.05

CENTRAL STATION EQUIPMENT.

Water wheels	2	190 h. p.
Alternating current generators.....	2	135 kw.

COMMERCIAL CONSUMERS.

Number of lighting consumers, metered 189, unmetered 55, total	244
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METERS AND TRANSFORMERS.

Total number of lighting meters	189
Total number of transformers	76
Total kilowatt capacity of transformers.....	120

LOAD DATA.

Connected street lighting load, series incandescent 10 kw.
 Period during which service is furnished: 12 hours at night.
 Schedule followed in street lighting: Dark to light.

R. F. CRAIG.

MARLOW, N. H.

NOTE.—Furnishing electricity is not the principal business of this operator.
 The utility is operated in connection with other business.

LOCALITY SERVED.

Marlow, N. H.

BALANCE SHEET.

Assets.

Cost of plant.....	\$1,500.00
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Liabilities.

Investment	\$1,500.00
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INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings.....	\$330.00
Other earnings	250.00
	<hr/>
Total operating revenues	\$580.00
Operating expenses:	
Labor expense	\$240.00
Materials and other expense.....	150.00
	<hr/>
Total operating expenses.....	390.00
	<hr/>
Net earnings	\$190.00

COMMERCIAL CONSUMERS.

Number of lighting consumers: metered 9, unmetered 2, total.	11
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METERS AND TRANSFORMERS.

Total number of lighting meters.....	9
Total number of transformers.....	3

LOAD DATA.

Period during which service is furnished.....From dark to 11 o'clock P. M.

DERRY ELECTRIC COMPANY.

DERRY, N. H.

PRINCIPAL OFFICERS.

President, Greenleaf K. Bartlett; Vice-President, Warren P. Horne; Clerk, Benjamin T. Bartlett; Treasurer and General Manager, J. B. Bartlett; Auditor, Charles Bartlett, Superintendent, David F. Griffiths, Derry, N. H.

DIRECTORS.

G. K. Bartlett, F. J. Shepard, J. B. Bartlett, Charles Bartlett, Warren P. Horne, Benjamin T. Bartlett, David F. Griffiths, Derry, N. H.

HISTORY.

Incorporated April 11, 1911, under the general law of the State of New Hampshire.

LOCALITY SERVED.

Derry and part of Londonderry.

CAPITAL STOCK.

Authorized and outstanding:	
Common, 500 shares, par value \$100 each.....	\$50,000.00
Dividends declared during year, 4%.....	2,000.00
Number of stockholders, 7; all in New Hampshire.	

FUNDED DEBT.

Authorized and outstanding:	
First mortgage bonds, 1911-1931, par value.....	\$50,000.00
Par value held in treasury.....	10,000.00
Interest accrued and paid during year, 5%.....	2,500.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$6,439.89	
Accounts receivable—electric	829.64	
Accounts receivable—sundry	413.00	
Interest and dividends receivable.....	83.23	
		\$7,765.86
Fixed capital		106,907.95
Re-acquired securities		10,000.00
Total		\$124,673.81

Liabilities.

Current liabilities:		
Taxes accrued	\$164.79	
Interest accrued on funded debt.....	416.67	
Consumers' deposits	354.76	
Accounts payable	510.94	
		\$1,447.16
Funded debt		50,000.00
Reserve for depreciation		15,000.00
Capital stock—common		50,000.00
Surplus		8,226.65
Total		\$124,673.81

FIXED CAPITAL.

Organization	\$4,900.00
Royalties, franchises and licenses.....	2,500.00
Other intangible electric capital.....	6,000.00
Land	2,000.00
Structures	4,000.00
Machinery and apparatus	23,546.87
Poles and fixtures	9,182.00
Transmission conductors—overhead	1,800.00
Distribution system—overhead	8,894.72
Electric services	6,000.00
Line transformers	6,808.21
Electric meters	10,447.77
Arc lamps and glower lamps	150.00
Municipal street lighting system.....	9,000.00
General equipment	6,678.38
Total cost of fixed capital.....	\$106,907.95
Less reserve for depreciation.....	15,000.00
Total (net) value of fixed capital.....	\$91,907.95

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting	\$15,093.98	
Commercial power	8,139.96	
Municipal lighting	2,729.93	
Merchandise and jobbing revenue—electric (net)	624.49	
Other operating revenues	350.00	
Total operating revenues		\$26,938.36
Operating expenses:		
Production	\$8,510.90	
Transmission and distribution.....	4,917.96	
Insurance	226.49	
General depreciation	5,000.00	
Miscellaneous	21.08	
Total operating expenses.....	\$18,676.43	
Taxes	659.14	
Total revenue deductions		\$19,335.57
Gross operating income		\$7,602.79
Non-operating revenues:		
Income from investments.....		387.50
Gross income		\$7,990.29
Deductions from gross income:		
Interest on funded debt		2,500.00
Net income		\$5,490.29
Surplus at beginning of year.....		4,736.36
Total surplus		\$10,226.65
Dividends on common stock.....		2,000.00
Surplus at close of year.....		\$8,226.65

PRODUCTION AND SALES.

Kilowatt hours purchased.....	522,825
Kilowatt hours sold during year.....	446,913
Kilowatt hours used by respondent.....	5,512
Kilowatt hours unaccounted for.....	70,400
Maximum load, November 9.....	278 kws.
Minimum load, May 3.....	133 kws.

SERVICES RENDERED.

	Derry.	Londonderry.
Number of consumers	427	5
Number of meters in service.....	420	5
Current supplied:		
Private consumers, kw. h.....		285,590
Municipal street lighting, kw. h.....		26,313
Other public service corporations, kw. h.....		135,010
Used by respondent, kw. h.....		5,512
Total current supplied, kw. h.....		452,425

DOVER.

(See Twin State Gas & Electric Co.)

Dover Division.

EXETER & HAMPTON ELECTRIC COMPANY.

EXETER, N. H.

PRINCIPAL OFFICERS.

President, Allen Hollis, Concord, N. H.; Vice-President, Charles H. Tenney, Boston, Mass.; Clerk, John Scammon, Exeter, N. H.; Treasurer, E. A. Bradley; Auditor, H. A. Gidney; General Manager, H. T. Sands, Boston, Mass.; Manager, George D. Baxter, Exeter, N. H.

DIRECTORS.

Charles H. Tenney, Boston, Mass.; B. E. Helm, Kingston, R. I.; Allen Hollis, Concord, N. H.; John Templeton, Exeter, N. H.; Ernest G. Cole, Thomas L Perkins, Hampton, N. H.; H. T. Sands, Boston, Mass.

HISTORY.

Originally organized as a department of the Exeter, Hampton & Amesbury Street Railway.

Reorganized and incorporated as a separate corporation March 30, 1908, under the general law of the State of New Hampshire.

LOCALITIES SERVED.

Exeter, Hampton, Kingston, Stratham, Hampton Falls and Seabrook.

CAPITALIZATION.

Capital stock, authorized and outstanding:	
Common, 1,250 shares, par value \$100 each.....	\$125,000.00
Dividends declared and paid during year, 6%.....	6,750.00
Number of stockholders, 1: number in New Hampshire, 0.	

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$984.66	
Accounts receivable—electric	3,524.08	
Accounts receivable—sundry	1,466.85	
Other accounts receivable.....	70.00	
		\$6,045.59

Materials and supplies.....	\$4,081.92
Investments	11,534.90
Fixed capital	141,851.36
Construction work in progress.....	1,107.76
Prepayments	1,188.83
Total	<u>\$165,810.36</u>

Current liabilities:

Interest accrued on unfunded debt.....	\$64.23
Bills payable (promissory notes).....	8,500.00
Consumers' deposits	438.00
Accounts payable	6,159.72
	<u>\$15,161.95</u>
Reserve for depreciation.....	2,462.88
Optional reserves	162.78
Capital stock—common	125,000.00
Surplus	23,022.75
Total	<u>\$165,810.36</u>

INVESTMENTS.

Office building at Exeter, N. H., and land occupied by the same.
Actual cost, \$11,534.90; income accrued during year, \$413.43.

FIXED CAPITAL.

Land	\$622.50
Structures	36,437.59
Machinery and apparatus.....	39,733.17
Poles and fixtures*	
Distribution system—overhead	47,416.97
Electric services*	
Line transformers	6,146.14
Electric meters	7,653.19
Arc lamps and glower lamps.....	797.01
Municipal street lighting system*	
General equipment	3,044.79
Total cost of fixed capital.....	<u>\$141,851.36</u>
Less reserve for depreciation.....	2,462.88
Total (net) value of fixed capital.....	<u>\$139,388.48</u>

INCOME ACCOUNT.

Operating revenues:

Commercial lighting	\$18,371.30
Commercial power	5,802.06
Municipal lighting	8,700.01
Other operating revenues.....	281.62
Total operating revenues.....	<u>\$33,154.99</u>

Operating expenses:

Production	\$10,210.17
Transmission and distribution.....	3,796.69
Insurance	480.97
General depreciation	1,309.84
Miscellaneous	9,597.85
Total operating expenses.....	<u>\$25,395.52</u>
Taxes	607.57
Uncollectible bills	110.44
Total revenue deductions.....	<u>26,113.53</u>
Gross operating income.....	<u>\$7,041.46</u>

*Included with Distribution System—overhead.

Non-operating revenues:	
Rent from real estate.....	\$1,673.43
Interest on bank deposits.....	1.92
Other non-operating revenues.....	150.09
Total non-operating revenues.....	<u>\$1,825.44</u>
Gross income	\$8,866.90
Deductions from gross income:	
Interest on unfunded debt.....	740.20
Net income	<u>\$8,126.70</u>
Surplus at beginning of year.....	22,452.00
Total surplus	<u>\$30,578.70</u>
Net adjustments during year (Debit).....	805.95
Adjusted balance	<u>\$29,772.75</u>
Dividends on common stock, 6%.....	6,750.00
Surplus at close of year.....	<u>\$23,022.75</u>

PRODUCTION AND SALE.

Kilowatt hours purchased	580,678
Kilowatt hours delivered at switchboard	580,678
Kilowatt hours sold during year.....	399,465
Kilowatt hours used by respondent	2,496
Kilowatt hours unaccounted for	178,717
Per cent unaccounted for.....	31
Maximum load, December 8, 1913.....	266 kws.

SERVICES RENDERED.

	Exeter.	Hampton.	Kingston.	Stratham.
Number of consumers	212	336	44	16
Number of meters in service	270	423	46	17
Current supplied:				
Private consumers, kw. h..	200,845.9	78,984.1	7,162	2,225
Municipal street lighting,				
kw. h.	91,067.2	17,394.7	1,786	....
Used by respondent.....	2,496	.....	....	....
Total current supplied..	294,409.1	96,378.8	8,948	2,225

EXETER RAILWAY & LIGHTING CO.

This is a holding company only, owning the stock of the Exeter & Hampton Electric Company, and the stock and bonds of the Exeter, Hampton & Amesbury Street Railway.

(For report see Street Railways.)

FALL MOUNTAIN ELECTRIC COMPANY.

BELLOWS FALLS, VT.

PRINCIPAL OFFICERS.

President, Henry I. Harriman, Boston, Mass.; Vice-President and General Manager, Leland J. Royce, Bellows Falls, Vt.; Clerk and Treasurer, William W. Brooks, Boston, Mass.

DIRECTORS.

Henry I. Harriman, Boston, Mass.; Leland J. Royce, Bellows Falls, Vt.; Malcolm G. Chase, George B. Baker, William W. Brooks, Boston, Mass.

HISTORY.

Incorporated March 18, 1913, under the general law of the Commonwealth of Massachusetts.

LOCALITIES SERVED.

Walpole, Alstead and Charlestown, N. H., Bellows Falls, Westminster and Saxton's River, Vt.

CAPITALIZATION.

Capital stock, authorized and outstanding:	
Common, 1,250 shares, par value \$100 each.....	\$125,000.00
Dividends declared and paid during year, 10%.....	12,500.00
Number of stockholders, 2; number in New Hampshire, 0.	

Funded debt, authorized and outstanding:	
First mortgage bonds of Fall Mountain Electric Light & Power Company. Liability assumed by Fall Mountain Electric Company, April 1, 1904-April 1, 1924.	
Total par value authorized	\$100,000.00
Total par value outstanding	65,000.00
Held in treasury unissued.....	35,000.00
Dividends accrued during year, 5%.....	3,145.86
Dividends paid during year.....	3,125.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$350.25
Bills receivable (notes)	498.79
Accounts receivable—electric	15,938.33
Accounts receivable—sundry	27,144.06
Materials and supplies.....	13,695.42
Cash in banks.....	4,259.42
Loan account (electric fans).....	1,485.00
	<hr/>
	\$63,371.27
Special deposits	1,001.00
Fixed capital	283,944.27
Construction work in progress.....	859.00
Prepayments	84.99
	<hr/>
Total	\$349,260.53

Liabilities.

Current liabilities:	
Taxes accrued	\$550.59
Interest accrued on funded debt.....	812.50
Accounts payable	23,877.09
Payrolls payable	250.00
Rentals accrued	201.30
	<hr/>
	\$25,691.48
Funded debt	65,000.00
Reserve for depreciation.....	71,193.15
Optional reserves	2,993.44
Capital stock—common	125,000.00
Surplus	59,382.46
	<hr/>
Total	\$349,260.53

SINKING FUND AND SPECIAL DEPOSITS.

Special deposits:	
Casualty fund	\$1,001.00

FIXED CAPITAL.

Property purchased	\$265,890.45
Machinery and apparatus.....	986.86
Transmission conductors—overhead	4,254.19
Distribution system—overhead	5,084.97
Line transformers	5,800.20
Electric meters	1,914.31
General equipment	13.29
Total cost of fixed capital.....	<u>\$283,944.27</u>

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting	\$40,223.50	
Commercial power	37,360.38	
Municipal lighting	8,428.61	
Merchandise and jobbing revenue—electric (net)	1,268.30	
Total operating revenues.....		<u>\$87,280.79</u>
Operating expenses:		
Production	\$49,864.72	
Transmission and distribution.....	6,938.89	
Insurance	407.51	
General depreciation	3,600.00	
Miscellaneous	6,977.27	
Total operating expenses.....	<u>\$67,788.39</u>	
Taxes	3,002.72	
Total revenue deductions.....		<u>70,791.11</u>
Gross operating income.....		<u>\$16,489.68</u>
Non-operating revenues:		
Interest on bank deposits.....		<u>872.98</u>
Gross income		<u>\$17,362.66</u>
Deductions from gross income:		
Interest on funded debt.....		<u>3,145.86</u>
Net income		<u>\$14,216.80</u>
Surplus at beginning of year.....		<u>57,665.66</u>
Total surplus		<u>\$71,882.46</u>
Dividends on common stock, 10%.....		<u>12,500.00</u>
Surplus at close of year.....		<u>\$59,382.46</u>

PRODUCTION AND SALES.

Kilowatt hours generated	534,961
Kilowatt hours purchased	3,422,883
Kilowatt hours delivered at switchboard.....	3,957,844
Kilowatt hours sold during year.....	3,094,221
Kilowatt hours unaccounted for	863,623
Per cent unaccounted for.....	21.8
Maximum load, February 12, 1914.....	1,410 kws.
Minimum load, March 15, 1914.....	290 kws.

SERVICES RENDERED.

	Bellows Falls.	North Walpole.	Walpole.	Alstead.	Charlestown.	Springfield.	Saxton's River.	West- minster.
Number of consumers	861	97	99	59	116	1	67	47
Number of meters in service	824	95	94	56	110	1	65	42
Connected load, kw.....	2,263.61	218.75	254.50	82.45	349.15	414.00	152.22	75.90
Current supplied:*								
Private consumers	1,380,054.0	55,022.7		15,730.0	90,165.0	.....	31,856.2	8,746.6
Municipal street lighting.	115,114.6	14,619.0		9,271.9	16,278.3	.....	9,047.8	6,084.9
Other public service cor- porations .....	.....	.....		.....	.....	1,342,230.0	.....	.....
Total current supplied.	1,495,168.6	69,641.7		25,001.9	106,443.3	1,342,230.0	40,904.0	14,831.5

*Under "current supplied" Bellows Falls and North Walpole are taken to, ther.

FALL MOUNTAIN ELECTRIC LIGHT & POWER COMPANY.

BELLOWS FALLS, VT.

PRINCIPAL OFFICERS.

President, Henry I. Harriman, Boston, Mass.; Vice-President and General Manager, Leland J. Royce, Bellows Falls, Vt.; Clerk and Treasurer, William W. Brooks, Boston, Mass.

DIRECTORS.

Henry I. Harriman, Boston, Mass.; Leland J. Royce, Bellows Falls, Vt.; Malcolm G. Chase, George B. Baker, William W. Brooks, Boston, Mass.

HISTORY.

Incorporated March 31, 1901, under the general law of the State of Vermont.

LOCALITIES SERVED.

Walpole, Alstead and Charlestown, N. H.; Bellows Falls, Westminster and Saxton's River, Vt.

NOTE—On January 23, 1914, this company was, by order No. 261 (see 4 N. H. P. S. C. R. 163) given authority to transfer all of its property, rights and franchises in New Hampshire to the Fall Mountain Electric Company, the report of which company is given in this volume.

ORVILLE D. FESSENDEN.

SOUTH BROOKLINE, N. H.

(Individual)

LOCALITY SERVED.

Brookline, N. H.

GENERAL BALANCE SHEET.

Assets.

Cost of plant.....	\$5,878.40
Materials and supplies.....	75.00
Loss	600.35
Total	\$6,553.75

Liabilities.

Investment	\$5,878.40
Items payable	675.35
Total	\$6,553.75

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings.....	\$432.50
Other earnings	338.45
Total operating revenues.....	\$770.95

Operating expenses:

Labor expense	\$350.00	
Materials and other expense.....	563.60	
Taxes	105.00	
Total operating expenses.....		\$1,018.60
Net loss		247.65
Interest		352.70
Loss at close of year.....		\$600.35

CENTRAL STATION EQUIPMENT.

Alternating current generators.....	No. 1	Total capacity. 60 kw.
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COMMERCIAL CONSUMERS.

Number of lighting consumers, metered 16, unmetered 2. total	18
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METERS AND TRANSFORMERS.

Total number of lighting meters	16
Total number of transformers	5
Total kilowatt capacity of transformers.....	29

LOAD DATA.

Connected lighting load	24 kw.
Connected street lighting load	6 kw.
"Peak load" as maximum instantaneous demand...	25 kw. (estimate)
Period during which service is furnished: from sundown to midnight.	
Schedule followed in street lighting: moonlight.	

FOX & PUTNAM.

NORTH WOODSTOCK, N. H.

PARTNERS.

Frank A. Fox, Ernest L. Putnam, North Woodstock, N. H.
Extent of partner's interest: each owns one-half.

HISTORY.

Partnership formed: August, 1908.

LOCALITY SERVED.

Parts of North Woodstock and Lincoln.

GENERAL BALANCE SHEET.

Assets.

Cost of plant.....	\$1,767.17
Cash	185.95
Items receivable	125.20
Total	\$2,078.32

Liabilities. -

Investment	\$1,767.17
Items payable	52.44
Profit	258.71
Total	\$2,078.32

INCOME ACCOUNT.

Operating revenues:		
Municipal street lighting earnings.....	\$461.41	
Other earnings	1,542.43	
Total operating revenues.....		\$2,003.84
Operating expenses:		
Labor expense	\$25.62	
Materials and other expense.....	1,525.86	
Taxes	115.85	
Total operating expenses.....		1,667.33
Net earnings		\$336.51
Other payments		77.80
Profit for year.....		\$258.71

COMMERCIAL CONSUMERS.

Number of lighting consumers, metered 55, unmetered 3, total	58
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METERS AND TRANSFORMERS.

Total number of lighting meters	55
Total number of transformers	5

LOAD DATA.

Connected lighting load	13.75 kw.
Connected power load	no power
Connected street lighting load	1.8 kw.
"Peak load" as maximum instantaneous demand (estimate)	13 kw.
Service is continuous throughout day of 24 hours.	
Schedule followed in street lighting: 5 hours nightly.	

STATISTICS OF POWER GENERATION.

Total kw. h. purchased.....	14,843
Purchased of J. E. Henry & Sons Co., Lincoln, N. H.	

THE FRANKLIN LIGHT & POWER COMPANY.

FRANKLIN, N. H.

PRINCIPAL OFFICERS.

President, Alvah W. Sulloway; Vice-President, Frank Proctor; Clerk, Edward G. Leach; Treasurer, General Manager and Superintendent, John P. Proctor, Franklin, N. H.

DIRECTORS.

A. W. Sulloway, W. Fisher Daniell, E. G. Leach, C. W. Adams, James Aiken, M. Duffy, Frank Proctor, A. M. Hancock, J. P. Proctor, Franklin, N. H.

HISTORY.

Incorporated April 30, 1896; amended December 27, 1899, under the general law of the State of New Hampshire.

LOCALITY SERVED.

Franklin, N. H.

CAPITAL STOCK.

Common, authorized and outstanding:	
1,500 shares, par value \$100 each.....	\$150,000.00
Dividends declared and paid during year.....	18,000.00
Number of stockholders, 50; number in New Hampshire, 44.	
Par value of stock held in New Hampshire.....	142,500.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$894.75	
Bills receivable (notes).....	6,000.00	
Accounts receivable	1,313.93	
		\$8,208.68
Materials and supplies.....		1,537.71
Fixed capital—gas		23,404.16
Fixed capital—electric		159,349.10
Total		\$192,499.65

Liabilities.

Capital stock—common	\$150,000.00
Surplus	42,499.65
Total	\$192,499.65

FIXED CAPITAL.

Gas.

Land	\$1,500.00
Structures	4,500.00
Machinery and apparatus.....	1,500.00
Trunk lines and mains.....	10,137.00
Gas services	3,650.81
Gas meters	2,116.35
Total cost of fixed capital—gas.....	\$23,404.16

Electric.

Land	\$30,887.75
Structures	26,262.84
Machinery and apparatus.....	25,575.74
Poles and fixtures.....	15,682.13
Transmission conductors—overhead	5,280.29
Distribution system—overhead	26,719.57
Electric services	5,504.93
Line transformers	12,298.21
Electric meters	9,069.54
Municipal street lighting system.....	2,068.10
Total cost of fixed capital—electric.....	\$159,349.10

INCOME ACCOUNT.

Operating revenues:

Gas—

Commercial lighting	\$2,381.65
Total—gas	\$2,381.65

Electric—

Commercial lighting	\$21,239.72
Commercial power	3,105.37
Municipal lighting	5,497.70
Other operating revenues—electric.....	1,175.15

Total—electric	31,017.94
Total operating revenues.....	\$33,399.59

Operating expenses:

Gas—		
Production	}	\$2,127.89
Transmission and distribution		
Total operating expenses—gas		\$2,127.89
Electric—		
Production		5,074.47
Transmission and distribution		5,074.47
Insurance		411.90
Miscellaneous		135.41
Total operating expenses—electric		\$10,696.25
Taxes		1,338.75
Total revenue deductions		\$14,162.89
Net income		\$19,236.70
Surplus at beginning of year		41,262.95
Total surplus		\$60,499.65
Dividends on common stock, 8%		18,000.00
Surplus at close of year		\$42,499.65

METER AND SERVICE DATA.

Gas Meters.

Number in use at beginning of year	108
Added during year	10
Removed during the year, none.	
Number in use at close of year	118

Consumers.

Number at beginning of year	108
Added during the year	10
Number at close of year	118

Gas Made and Sold During the Year.

Total gas made	585,622 ft.
Total gas sold, used and on hand	about 585,000 ft.
Number of feet unaccounted for during year	622 ft.

Electric.

Number of consumers	596
Number of meters in service	563

FREMONT.

(See Spaulding & Frost Company.)

GOODELL COMPANY.

ANTRIM, N. H.

PRINCIPAL OFFICERS.

President, Treasurer, and General Manager, David H. Goodell; Vice-President, Richard C. Goodell; Clerk, Henry A. Hurlin; Superintendent, E. C. Martin, Antrim, N. H.

DIRECTORS.

David H. Goodell, Richard C. Goodell, D. Dana Goodell, Antrim, N. H.

HISTORY.

Incorporated February 5, 1875; amended December 31, 1909, under the general laws of the State of New Hampshire.

NOTE.—Furnishing electricity is not the principal business of this operator. The utility is operated in connection with other business.

LOCALITY SERVED.

Antrim, Bennington and Hancock.

CAPITAL STOCK.

Authorized and outstanding:	
Common, 600 shares, par value \$100 each.....	\$60,000.00
Dividends declared or paid during year, none.	
Number of stockholders, 6; number in New Hampshire, 6.	

FUNDED DEBT.

Authorized and outstanding:	
First mortgage coupon notes, 1910-1919, maturing \$5,000 per year, par value authorized, 45,000 outstanding.....	\$30,000.00
Interest $4\frac{1}{2}\%$ accrued and paid during year.....	1,350.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$1,629.88	
Bills receivable (notes)	775.17	
Accounts receivable—electric	1,452.81	
Accounts receivable—sundry	18,358.70	
		\$22,216.56
Materials and supplies		221,088.58
Investments		3,750.00
Fixed capital—electric		64,297.76
Fixed capital—other departments		40,233.77
Total		\$351,586.67

Liabilities.

Current liabilities:		
Taxes accrued	\$1,418.01	
Interest accrued on unfunded debt.....	41.25	
Bills payable (promissory notes).....	25,000.00	
Accounts payable	4,078.09	
Other unfunded debt:		
D. H. Goodell, balance	12,022.09	
Antrim Baptist Church.....	550.00	
Antrim School District.....	1,100.00	
		\$44,209.44

Funded debt	\$30,000.00
Reserve for depreciation.....	16,854.06
Capital stock—common	60,000.00
Surplus	200,523.17
Total	<u>\$351,586.67</u>

INVESTMENT.

50 shares Wyoming Culery Co., Wilkesbarre, Pa., par value, \$5000; actual cost, \$3,750.00, carried on books at.....	\$3,750.00
Income accrued during year.....	.....

FIXED CAPITAL.

Royalties, franchises and licenses.....	\$10.81
Dams and penstocks.....	25,118.80
Land	4,460.00
Structures	6,574.30
Machinery and apparatus.....	8,839.02
Poles and fixtures	3,339.98
Transmission conductors—overhead	4,420.72
Distribution system—overhead	1,017.81
Electric services	105.29
Line transformers	3,600.09
Electric meters	1,913.88
Municipal street lighting system.....	1,998.64
General equipment	102.45
Miscellaneous expenditures during construction.....	2,795.97
Total cost of fixed capital.....	<u>\$64,297.76</u>
Less reserve for depreciation	16,854.06
Total (net) value of fixed capital.....	<u>\$47,443.70</u>

INCOME ACCOUNT.

Operating revenues:	
Commercial lighting	\$4,532.58
Commercial power	1,147.15
Municipal lighting	2,002.80
Merchandise and jobbing revenue—electric net	415.89
Other operating revenues.....	27.70
Total operating revenues.....	<u>\$8,126.12</u>
Operating expenses:	
Production	\$1,583.00
Transmission and distribution.....	1,199.95
Miscellaneous	1,303.68
Total operating expenses.....	<u>\$4,086.63</u>
Uncollectible bills	46.34
Total revenue deductions.....	<u>4,132.97</u>
Gross operating income.....	<u>\$3,993.15</u>
Non-operating revenues:	
Other non-operating revenues.....	5.37
Net income	<u>\$3,998.52</u>
Surplus at beginning of year.....	409.47
Total surplus	<u>\$4,407.99</u>
Net adjustments during year (debit).....	678.36
Adjusted balance (surplus).....	<u>\$3,729.63</u>
Dividends, credited gain and loss, general account.....	2,054.19
Surplus at close of year.....	<u>\$1,675.44</u>

PRODUCTION AND SALES.

Kilowatt hours generated.....	390,720	
Kilowatt hours used by respondent and unaccounted for.....	202,029.46	
Maximum load, Jan. 30, 1914.....	108.3	kws.
Minimum load, Oct. 30, 1914.....	54	kws.

SERVICES RENDERED.

	Antrim.	Bennington.
Number of consumers	167	58
Number of meters in service.....	132	46
Current supplied:		
Private consumers, house, meter and motor customers.....	119,731.82	kws.
Municipal street lighting	68,958.72	
Used by respondent	202,029.46	
Total current supplied	390,720	

GOODRICH FALLS ELECTRIC COMPANY.

INTERVALE, N. H.

PRINCIPAL OFFICERS.

President, A. N. Twitchell; Clerk and Auditor, George E. Clarke, Gorham, N. H.; Treasurer and General Manager, H. S. Mudgett, Intervale, N. H.

DIRECTORS.

A. N. Twitchell, George E. Clarke, John T. Peabody, Gorham, N. H., A. M. Stahl, Berlin, N. H., H. S. Mudgett, Intervale, N. H.

HISTORY.

Incorporated April 14, 1897, under the general laws of the State of New Hampshire. Amended February 26, 1898; June 6, 1898.

GENERAL BALANCE SHEET.

Assets.

Cost of plant.....	\$36,000.00
Cash	2,651.31
Items receivable	4,204.17
Total	\$42,855.48

Liabilities.

Capital stock	\$36,000.00
Items payable	2,156.24
Profit	4,699.24
Total	\$42,855.48

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings	\$1,008.00
Other earnings	7,963.09
Total operating revenues.....	\$8,971.09
Operating expenses:	
Labor expense	\$1,640.00
Materials and other expense.....	3,368.70
Taxes	410.28

GREENVILLE ELECTRIC LIGHTING COMPANY.

337

Total operating expenses.....	\$5,418.98
Net earnings	\$3,552.11
Dividends	3,600.00
Loss for year	\$47.89
Profit at beginning of year.....	4,747.13
Profit at close of year.....	\$4,699.24

CENTRAL STATION EQUIPMENT.

Water wheels, 1.....	300 h. p.
Alternating current generators, 1.....	150 kw.

COMMERCIAL CONSUMERS.

Lighting consumers	214
Power consumers	3

METERS AND TRANSFORMERS.

Number of lighting meters.....	180
Number of power meters	3
Number of transformers	76
Total kilowatt capacity of transformers.....	415.5

LOAD DATA.

Service is continuous throughout the day of 24 hours.
Schedule followed in street lighting: all night every night in year.

GREENVILLE ELECTRIC LIGHTING COMPANY.

GREENVILLE, N. H.

PRINCIPAL OFFICERS.

President and Treasurer, Herbert J. Taft; Vice-President and Clerk, Harlin P. Upham, Greenville, N. H.

DIRECTORS.

Herber J. Taft, Harlin P. Upham, Eugene H. Coffin, Orrin D. Prescott, Greenville, N. H.

HISTORY.

Incorporated October 27, 1903, under the general laws of the State of New Hampshire.

LOCALITY SERVED.

Greenville, N. H.

BALANCE SHEET.

Assets.

Cost of plant	\$3,593.34
Cash	50.00
Items receivable	100.00
Total	\$3,743.34

Liabilities.

Capital stock	\$2,000.00
Investment, reserve depreciation.....	770.00
Items payable	200.00
Profit	773.34
Total	\$3,743.34

INCOME ACCOUNT.

Operating revenues:		
Municipal street lighting earnings.....	\$1,481.25	
Other earnings	1,835.18	
Total operating revenues.....		\$3,316.43
Operating expenses:		
Labor expense	\$1,337.94	
Materials and other expense.....	2,447.20	
Taxes	13.00	
Total operating expenses.....		3,798.14
Net loss		\$481.71
Other deductions		14.50
Loss for year		\$496.21
Profit at beginning of year.....		815.63
Profit for year.....		\$319.42
Adjustments		453.92
Profit at close of year.....		\$773.34

COMMERCIAL CONSUMERS.

Number of lighting consumers, metered 15, unmetered 13, total 28

METERS AND TRANSFORMERS.

Total number of lighting meters..... 15
 Total number of transformers..... 16
 Total kilowatt capacity of transformers..... 30

LOAD DATA.

Connected lighting load..... 40 kw.
 Connected street lighting load..... 3 kw.
 Period during which service is furnished: from dark until daylight.
 Schedule followed in street lighting; all night every night.

POWER GENERATION.

Total kw. h. generated (estimated)..... 44,000

GROVETON ELECTRIC LIGHT COMPANY.

GROVETON, N. H.

PRINCIPAL OFFICERS.

President, W. A. Knight, Auburn, Me.; Vice-President, Geo. B. Bearce;
 Treasurer and General Manager, Harry Stetson, Lewiston, Me.; Clerk, E. H.
 Macloon, Groveton, N. H.

DIRECTORS.

W. A. Knight, Auburn, Me.; Geo. E. Bearce, Harry Stetson, Geo. B.
 Bearce, John D. Clifford, Lewiston, Me.

LOCALITY SERVED.

Groveton and North Stratford.

BALANCE SHEET.

Assets.

Cost of plant	\$19,139.75
Cash	226.83
Items receivable	821.93
Total	\$20,188.51

Liabilities.

Capital stock	\$10,000.00
Items payable	100.00
Profit	10,088.51
Total	<hr/> \$20,188.51

INCOME ACCOUNT.

Operating revenues:		
Municipal street lighting earnings.....	\$1,498.28	
Other earnings	5,467.94	
	<hr/>	
Total operating revenues		\$6,966.22
Operating expenses:		
Labor expense	\$825.89	
Materials and other expense.....	1,918.83	
Taxes	154.00	
	<hr/>	
Total operating expenses		2,898.72
		<hr/>
Net earnings		\$4,067.50
Interest	\$21.80	
Dividends declared, 29%.....	2,900.00	
Other payments	9.90	
	<hr/>	
Total deductions		2,931.70
		<hr/>
Profit for year.....		\$1,135.80
Profit at beginning of year.....		8,952.71
		<hr/>
Profit at close of year.....		\$10,088.51

COMMERCIAL CONSUMERS.

Number of lighting consumers, metered.....	195
Number of power consumers, metered.....	7

METERS AND TRANSFORMERS.

Total number of lighting meters.....	195
Total number of power meters.....	7
Total number of transformers.....	21
Total kilowatt capacity of transformers.....	9,810

LOAD DATA.

Connected lighting load.....	147.36 kw.
Connected power load.....	14.17 kw.
Connected street lighting load.....	9.350 kw.
"Peak load" as maximum instantaneous demand (estimate)	95 kw.
Schedule followed in street lighting: all night.	

STATISTICS OF POWER GENERATION.

Total kw. h. purchased.....	124,583
Purchased from Lyman Falls Power Co.	

GROVETON.

(See Lyman Falls Power Company.)

J. E. HENRY & SONS COMPANY.

LINCOLN, N. H.

PRINCIPAL OFFICERS.

President, J. E. Henry; Vice-President and Secretary, C. B. Henry;
Treasurer, J. H. Henry, Lincoln, N. H.

DIRECTORS.

G. E. Henry, J. H. Henry, C. B. Henry, Lincoln, N. H.; Alfred Stanley,
Plymouth, N. H.

HISTORY.

Incorporated February 19, 1895; amended March 2, 1896, and March 11,
1896, under the general laws of the State of New Hampshire.

NOTE.—This is not the principal business of this operator. The utility
is operated in connection with other business.

LOCALITY SERVED.

Lincoln and North Woodstock, N. H.

BALANCE SHEET.

Assets.

Cost of plant	\$172,800.00
Total	\$172,800.00

Liabilities.

Capital stock	\$38,400.00
Surplus adjustment	131,057.02
Profit	3,342.98
Total	\$172,800.00

INCOME ACCOUNT.

Operating revenues:		
Municipal street lighting earnings.....	\$227.15	
Other earnings	9,895.63	
Total operating revenues.....		\$10,122.78
Operating expenses:		
Labor expense	\$2,880.00	
Materials and other expense.....	5,531.00	
Taxes	45.00	
Total operating expenses		8,456.00
Profit for year		\$1,666.78
Profit at beginning of year.....		1,676.20
Profit at close of year.....		\$3,342.98

CENTRAL STATION EQUIPMENT.

	No.	Total capacity.
Boiler	1	150 h. p.
Steam engine	1	325 h. p.
Alternating current generators.....	7	2,300 kw.
Exciters	5	50 kw.

COMMERCIAL CONSUMERS.

Number of lighting consumers (all metered).....	81
Number of power consumers (unmetered).....	1

METERS AND TRANSFORMERS.

Total number of lighting meters.....	86
Total number of transformers.....	9
Total kilowatt capacity of transformers.....	35

LOAD DATA.

Connected lighting load.....	50 kw.
Connected street lighting load.....	1 kw.
"Peak load" as maximum instantaneous demand.....	60 kw.
Service is continuous throughout day of 24 hours.	
Schedule followed in street lighting: from dark till 11 P. M.	

HILL LIGHT AND POWER COMPANY.

HILL, N. H.

(Frank R. Woodward, Owner.)

NOTE.—Plant operated in connection with manufacturing plant.

LOCALITY SERVED.

Hill, N. H.

BALANCE SHEET.

Assets.

Cost of plant	\$5,244.38
Items receivable	369.15
Total	\$5,613.53

Liabilities.

Investment	\$5,244.38
Items payable	308.85
Profit	60.30
Total	\$5,613.53

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings.....	\$425.00
Other earnings	393.84
Total operating revenues.....	\$818.84
Operating expenses:	
Labor expense	\$758.00
Materials and other expense.....	.54
Total operating expenses.....	758.54
Profit at close of year.....	\$60.30

COMMERCIAL CONSUMERS.

Number of lighting consumers, metered.....	32
Number of power consumers, metered.....	1

METERS AND TRANSFORMERS.

Total number of lighting meters.....	32
Total number of transformers.....	10
Total kilowatt capacity of transformers.....	31

LOAD DATA.

Schedule followed in street lighting: From one-half hour after sunset till one-half hour before sunrise.

STATISTICS OF POWER GENERATION.

All water power purchased from N. E. Novelty Works.

HILLSBORO ELECTRIC LIGHT AND POWER COMPANY.

HILLSBORO, N. H.

PRINCIPAL OFFICERS.

President and Treasurer, W. P. Grimes; Vice-President, John Goodell; Clerk, W. D. Forsaith; Auditors, W. D. Forsaith and J. Goodell; General Manager and Superintendent, George J. Wadleigh, Hillsboro, N. H.

DIRECTORS.

W. P. Grimes, John Goodell, Hillsboro, N. H.; J. W. Grimes, Reading, Mass.; J. H. Grimes, Parker James, Hillsboro, N. H.; C. P. Grimes, Penacook, N. H.; W. D. Forsaith, Hillsboro, N. H.

HISTORY.

Date of organization: January 25, 1895. Incorporated under the general laws of the State of New Hampshire.

LOCALITY SERVED.

Hillsboro and Henniker, N. H.

CAPITAL STOCK.

Common, authorized and outstanding:	
700 shares, par value \$50 each.....	\$35,000.00
Dividends declared and paid during year, 12%.....	4,200.00
Number of stockholders, 20; number in New Hampshire, 17.	
Par value of stock held in New Hampshire.....	30,200.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$1,695.84
Accounts receivable—electric	813.07
Accounts receivable—sundry.....	19.52
Interest and dividends receivable.....	88.00
	<hr/>
	\$2,616.43
Materials and supplies.....	1,204.32
Investments	2,500.00
Special deposits	4,000.00
Fixed capital	72,208.61
	<hr/>
Total	\$82,529.36

Liabilities.

Current liabilities	\$407.88
Reserve for depreciation.....	4,000.00
Capital stock—common	35,000.00
Surplus	43,121.48
	<hr/>
Total	\$82,529.36

INVESTMENTS.

Nature of Investment.	Par value.	Actual cost.	Carried on books at	Income accrued during year.
25 shares Amoskeag Pfd.	\$2,500.00	\$2,518.75	\$2,500.00	\$112.50

FIXED CAPITAL.

Land	\$2,050.00
Structures	29,740.86
Machinery and apparatus	8,343.49
Poles and fixtures	4,977.72
Distribution system—overhead	18,558.66
Line transformers	2,830.43
Electric meters	2,943.90
General equipment	668.80
Miscellaneous expenditures during construction	2,094.75
Total cost of fixed capital	\$72,208.61
Less reserve for depreciation	4,000.00
Total (net) value of fixed capital	\$68,208.61

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting	\$6,598.56	
Municipal lighting	2,895.83	
Total operating revenues		\$9,494.39
Operating expenses:		
Production	\$2,138.74	
Transmission and distribution	504.33	
Total operating expenses	\$2,643.07	
Taxes	437.45	
Uncollectible bills	271.03	
Total revenue deductions		3,351.55
Gross operating income		\$6,142.84
Non-operating revenues:		
Interest on bank deposits	\$199.11	
Income from investments	112.50	
Total non-operating revenues		311.61
Net income		\$6,454.45
Surplus at beginning of year		38,169.86
Total surplus		\$44,624.31
Net adjustments during year, Cr.		2,697.17
Adjusted balance		\$47,321.48
Dividends on common stock		4,200.00
Surplus at close of year		\$43,121.48

SERVICES RENDERED.

	Hillsboro.	Henniker.
Number of consumers	202	103
Number of meters in service	166	92

HINSDALE.

(See Twin State Gas & Electric Company.)

Brattleboro Division.

JAFFREY AND TROY ELECTRIC LIGHT COMPANY.

JAFFREY, N. H.

Main Office, 19 Congress St., Boston, Mass.

HISTORY.

Incorporated February, 1909, under general laws of New Hampshire.

LOCALITY SERVED.

Jaffrey.

PRINCIPAL OFFICERS.

President, John B. Shearer, Boston, Mass.; Secretary, Ernest L. Spaulding, E. Jaffrey, N. H.; Treasurer, R. L. Pond, Jr., Lynn, Mass.; Superintendent, John H. Kenney, E. Jaffrey, N. H.

DIRECTORS.

Edmund C. Shattuck, Ernest L. Spaulding, E. Jaffrey, N. H.; John B. Shearer, Robert L. Pond, Jr., Boston, Mass.

GENERAL BALANCE SHEET.

Assets.

Cost of plant	\$38,055.43
Cash	889.15
Items receivable	3,521.52
Materials and supplies.....	148.37
Loss	5,200.44
Total	<u>\$47,814.91</u>

Liabilities.

Capital stock	\$25,000.00
Bonds	8,500.00
Items payable	14,314.91
Total	<u>\$47,814.91</u>

INCOME ACCOUNT.

Operating revenues:		
Municipal street lighting earnings.....		\$2,000.00
Other earnings		3,932.27
Total operating revenues		<u>\$5,932.27</u>
Operating expenses:		
Labor expense	\$990.41	
Materials and other expense.....	3,448.23	
Taxes	132.47	
Total operating expenses.....		<u>4,571.11</u>
Net earnings		\$1,361.16
Interest		658.35
Profit for year.....		<u>\$702.81</u>

Loss at beginning of year	\$125.82
*Adjustments during year	5,477.43
Loss at close of year.....	<u>\$5,200.44</u>

CENTRAL STATION EQUIPMENT.

Water wheels, 1; 125 h. p.

COMMERCIAL CONSUMERS.

Number of lighting consumers, metered.....	63
Number of lighting consumers, unmetered.....	27
Number of power consumers, metered.....	1
Number of power consumers, unmetered.....	1

METERS AND TRANSFORMERS.

Total number of lighting meters.....	63
Total number of power meters.....	1
Total number of transformers.....	21
Total kilowatt capacity of transformers.....	60

LOAD DATA.

Connected lighting load.....	82 kw.
Connected power load.....	18 kw.
Connected street lighting load, 100, 32 c. p. s. s. amp. tungsten series.	
"Peak load" as maximum instantaneous demand (estimated)	50 kw.
Service is continuous throughout day of 24 hours.	
Schedule followed in street lighting: all night, every night.	

MISCELLANEOUS STATISTICS.

Total power purchased: 80,000 kw. h.
Purchased from New Hampshire Water and Electric Power Co., at rate of
2½ cents per kw. h.

JONES & LINS COTT ELECTRIC COMPANY.

LANCASTER, N. H.

PRINCIPAL OFFICERS.

President, H. H. Jones; Clerk, Merrill Shurtleff; Treasurer, Fred S. Linscott, Lancaster, N. H.

DIRECTORS.

H. H. Jones, Fred S. Linscott, W. H. McCarten, C. W. Sleeper, Merrill Shurtleff, Lancaster, N. H.

HISTORY.

Incorporated May 23, 1908, under the general laws of the State of New Hampshire.

LOCALITY SERVED.

Lancaster, N. H.

BALANCE SHEET.

Assets.

Cost of plant	\$53,570.84
Cash	225.60
Items receivable	1,504.43
Materials and supplies.....	231.23
Loss	2,009.48
Total	<u>\$57,541.58</u>

*The company explained by correspondence that in opening a new set of books on June 30, 1914, it was necessary to make this adjustment to check the assets and liabilities. It was stated that facts and figures then available did not check by this amount with the figures previously reported.

Liabilities.

Capital stock	\$40,000.00
Bonds	17,000.00
Items payable	541.58
Total	57,541.58

INCOME ACCOUNT.

Operating revenues:		
Municipal street lighting earnings.....	\$1,709.40	
Other earnings	6,189.08	
Total operating revenues.....		\$7,898.48
Operating expenses:		
Labor expense	\$1,887.71	
Materials and other expense.....	2,492.10	
Taxes	400.00	
Total operating expenses.....		4,779.81
Net earnings		\$3,118.67
Interest	\$850.00	
Dividends declared	1,600.00	
Total deductions		2,450.00
Profit for year		\$668.67
Loss at beginning of year.....		2,678.15
Loss at close of year.....		\$2,009.48

CENTRAL STATION EQUIPMENT.

	No.	Total capacity.
Boilers	1	100 h. p.
Steam engines	1	100 h. p.
Internal combustion engines.....	1	50 h. p.
Water wheels	2	140 h. p.
Alternating current generators.....	2	140 kw.

COMMERCIAL CONSUMERS.

Number of lighting consumers, metered 108, unmetered 41, total	149
Number of power consumers, metered 5, unmetered 6, total...	11

METERS AND TRANSFORMERS.

Total number of lighting meters	108
Total number of power meters	4
Total number of transformers.....	33
Total kilowatt capacity of transformers.....	120

LOAD DATA.

Connected lighting load	60 kw.
Connected power load.....	34 kw.
Connected street lighting load.....	10 kw.
Service continuous throughout the day of 24 hours.	
Schedule followed in street lighting: all night .	

— KEENE GAS & ELECTRIC COMPANY.

KEENE, N. H.

PRINCIPAL OFFICERS.

President, W. H. Elliott; Vice-President, W. L. Mason; Clerk, P. H. Faulkner; Treasurer and General Manager, G. M. Rossman; Superintendent, Ralph D. Smith, Keene, N. H.

DIRECTORS.

W. H. Elliot, W. L. Mason, G. M. Rossman, R. D. Smith, P. H. Faulkner, R. E. Faulkner, D. R. Cole, Harry Kingsbury, W. R. Porter, Keene, N. H.; Tucker Doland, Brookline, Mass.; J. W. Elliott, Boston, Mass.

HISTORY.

Incorporated June 27, 1860, under special law of the State of New Hampshire.

LOCALITIES SERVED.

Keene, Swanzey, E. Swanzey, Westport, Winchester, Ashuelot, Marlboro, Chesterfield, Westmoreland and Spofford.

CAPITALIZATION.

Capital stock authorized and outstanding:	
Common, 1500 shares; preferred, 1500 shares, par value \$100 each	\$300,000.00
Dividends declared and paid during year:	
Common, 8%, preferred, 5¼%	14,584.53
Number of stockholders, 84; number in New Hampshire, 76.	
Par value of stock held in New Hampshire	220,800.00
Funded debt, authorized and outstanding:	
First mortgage bonds, 5%, 1905-1935, par value authorized, \$200,000; par value outstanding	\$190,000.00
Interest accrued, \$9,494.44; paid during year	9,494.44

GENERAL BALANCE SHEET.

<i>Assets.</i>	
Cash and current assets:	
Cash	\$24,264.14
Bills receivable (Notes)	48,000.00
Accounts receivable—gas	1,102.62
Accounts receivable—electric	2,886.72
Accounts receivable—sundry	288.67
Prepaid interest	975.76
Dublin and Peterboro accounts	5,733.17
	<hr/>
	\$83,251.08
Materials and supplies	11,733.27
Reacquired securities:	
Ashuelot Gas & Elec. Co., common	70,000.00
Keene Development	6,000.00
Investments	73,470.33
Fixed capital—gas	202,443.01
Fixed capital—electric	320,467.39
Suspense	14,000.00
	<hr/>
Total	\$781,365.08

Liabilities.

Current liabilities:		
Taxes accrued	\$2,720.70	
Interest accrued on funded debt	3,958.34	
Interest accrued on unfunded debt	1,992.24	
Bills payable (promissory notes)	189,910.84	
Accounts payable	1,307.32	
Other unfunded debt:		
Ashuelot Gas & Electric Co.	9,978.28	
		<hr/>
		\$209,867.72
Funded debt		190,000.00
Reserve for depreciation		42,745.63
Optional reserves		303.37
Capital stock—preferred		150,000.00
Capital stock—common		150,000.00
Surplus		38,448.36
		<hr/>
Total		\$781,365.08

INVESTMENTS.

Nature of Investment.	Par value.	Actual cost.	Carried on books at	Income accrued during period.
Real estate:*				
Central Square and Washington Street, Keene, N. H.		\$73,470.33	\$73,470.33	\$579.22
Keene Development Co.	\$6,000.00	6,000.00	6,000.00	.....
Capital stock:				
Ashuelot Gas & Electric Co., 700 shares.	\$100.00	70,000.00	70,000.00	4,200.00
	<hr/>	<hr/>	<hr/>	<hr/>
Total		\$149,470.33	\$149,470.33	\$3,620.78

FIXED CAPITAL.

Gas.

Structures	\$89,027.04
Trunk lines and mains	64,345.62
Gas services	27,313.44
Gas meters	21,756.91
	<hr/>
Total cost of fixed capital—gas	\$202,443.01
Less reserve for depreciation	16,243.82
	<hr/>
Total (net) value of fixed capital—gas	\$186,199.19

Electric.

Organization	\$172.15
Land }	113,310.34
Structures }	109,304.04
Machinery and apparatus	
Poles and fixtures	
Transmission conductors—overhead	} 72,284.13
Transmission conductors—underground	
Distribution system—overhead	
Distribution system—underground	
Electric services	
Line transformers	16,531.55
Electric meters	8,394.37
Peterboro Office, construction	470.81
	<hr/>
Total cost of fixed capital—electric	\$320,467.39
Less reserve for depreciation	26,501.81
	<hr/>
Total (net) value of fixed capital—electric	\$293,965.58

*Revenues, \$6,615.23; expenses, \$7,194.45.

INCOME ACCOUNT.

Operating revenues:

Gas—		
Commercial lighting	\$40,688.25	
Merchandise and jobbing revenue—gas (net)	283.43	
Total operating revenues—gas		\$40,971.68
Electric—		
Commercial lighting	\$50,451.29	
Commercial power	32,921.97	
Municipal lighting	13,851.86	
Merchandise and jobbing revenue—elec- tric (net)	4,991.38	
Total operating revenues—electric		102,216.50
Total operating revenues		\$143,188.18

Operating expenses:

Gas—		
Production	\$20,807.63	
Transmission and distribution	2,338.41	
Insurance	935.68	
General depreciation	2,034.41	
Miscellaneous	8,335.53	
Total operating expenses—gas	\$34,451.66	
Electric—		
Production	\$7,417.43	
Transmission and distribution	28,441.90	
Insurance	4,829.62	
General depreciation	4,861.25	
Miscellaneous	15,602.25	
Rental Ashuelot Gas & Electric Co.	7,700.00	
Total operating expenses—electric	\$68,852.45	
Taxes	10,186.34	
Uncollectible bills	50.17	
Total revenue deductions		\$113,540.62
Gross operating income		\$29,647.56
Non-operating revenues		3,620.78
Gross income		\$33,268.34

Deductions from gross income:

Interest on funded debt	\$14,014.84	
Interest on unfunded debt	11,021.25	
Total deductions from gross income		25,036.09
Net income		\$8,232.25
Surplus at beginning of year		58,776.09
Total surplus		\$67,008.34
Net adjustments during year		13,975.45
Adjusted balance		\$53,032.89
Dividends on preferred stock, 5¼%	\$2,584.53	
Dividends on common stock, 8%	12,000.00	
Total dividends		14,584.53
Surplus at close of year		\$38,448.36

METER AND SERVICE DATA.

Size of Meter	Gas.				Number in use at close year.
	Number in use at beginning of year.	Added during year.	Removed during year.		
3-light	821	143	..		964
5-light	771	...	63		708
10-light	36	5	.		41
20-light	14	1	..		15
50-light	5	...	..		5
100-light	3	...	..		3
200-light	1	...	..		...
	1,651	149	63		1,736
Number of service pipes in use.....					1,302

Gas Made and Sold During the Year.

Number of feet on hand at beginning of year.....	47,000
Number of feet of gas made during the year:	
Water gas	33,646,800
Total gas made and on hand.....	33,693,800
Number of feet of gas sold by meter during the year.....	30,193,500
Number of feet of gas used at works and offices during the year	189,600
Number of feet of gas on hand at close of year.....	18,500
Total gas sold, used and on hand.....	30,401,600
Number of feet unaccounted for during the year.....	3,292,200

ELECTRIC.

Production and Sales During Period.

Kilowatt hours generated	739,659
Kilowatt hours purchased.....	1,797,069
Kilowatt hours delivered at switchboard.....	2,536,728
Kilowatt hours sold during year.....	1,972,875
Kilowatt hours used by respondent.....	83,274
Kilowatt hours unaccounted for.....	480,579
Per cent, unaccounted for	19

SERVICES RENDERED.

	Keene.	Swanzy.	Winchester.	Marlboro.	Chesterfield	Westmoreland.	Dublin.	Peterboro.
Number of consumers.....	617	117	161	7	47	13	78	202
Number of meters in service	676	131	170	8	58	14	126	251

(Kilowatt hours)

	Keene	Swanzy	Winchester	Marlboro	Chesterfield	Westmoreland	Dublin	Peterboro
Private consumers.	885,869	28,597	56,655	114,501	14,410	28,552	33,281	70,860
Municipal street lighting	181,930	20,826	24,558	.....	.....	.....	9,125	13,870
Other municipal service.....	11,324	113	1,073	716	68	195	.....	.....
Other public service corporations ..	311,925	.....	.....	10,280	.....	.....	.....	.....
Used by respondent	69,773	.....	.....	.....	.....	.....	.....	13,501
Total current supplied	1,460,821	49,536	82,286	125,497	14,478	28,747	42,406	98,231

PERCY KELLEY.

(See Center Harbor Electric Company.)

W. H. KENISTON & SON.

(See Rumney Electric Company.)

LACONIA GAS AND ELECTRIC COMPANY.

LACONIA, N. H.

PRINCIPAL OFFICERS.

President, W. L. Mason, Keene, N. H.; Vice-President, Allen Hollis, Concord, N. H.; Clerk, F. M. Beckford, Laconia, N. H.; Treasurer and General Manager, G. M. Rossman, Keene, N. H.; Auditor, C. H. Tenney Co., Boston, Mass.; Superintendent, F. T. Brockington, Laconia, N. H.

DIRECTORS.

W. L. Mason, Keene, N. H.; Allen Hollis, Concord, N. H.; G. M. Rossman, Keene, N. H.; F. T. Brockington, Edmund Little, Laconia, N. H.

HISTORY.

Incorporated April 20, 1910, amended March 30, 1912, under the general laws of the State of New Hampshire.

LOCALITIES SERVED.

Laconia, Weirs, Meredith, Belmont, Tilton, Gilford, Sanbornton.

CAPITALIZATION.

Capital stock, authorized and outstanding:	
Common, 2500 shares; preferred 2300 shares, par value...	\$480,000.00
Dividends declared and paid during year: preferred 4¼%, common, 6%	25,675.00
Number of stockholders, 224; number in New Hampshire, 178	
Par value of stock held in New Hampshire.....	416,900.00

GENERAL BALANCE SHEET.

<i>Assets.</i>	
Cash and current assets:	
Cash	\$27,292.51
Accounts receivable—gas	1,859.68
Accounts receivable—electric	2,909.12
	<hr/>
	\$32,061.31
Materials and supplies	13,566.28
Investments, Laconia Hotel Co.....	2,000.00
Fixed capital—gas	227,502.59
Fixed capital—electric	602,256.58
Suspense	2,500.00
Interest paid in advance	81.65
	<hr/>
Total	\$879,968.41
<i>Liabilities.</i>	
Current liabilities:	
Taxes accrued	\$2,190.92
Interest accrued on funded debt.....	5,631.94
Bills payable (promissory notes).....	17,500.00
	<hr/>
	\$25,322.86

Funded debt	\$350,000.00
Reserve for depreciation	16,395.76
Capital stock—preferred	230,000.00
Capital stock—common	250,000.00
Surplus	8,249.79
Total	<u>\$879,968.41</u>

INVESTMENT.

80 shares Laconia Hotel Co., par value \$25; actual cost.....	\$2,000.00
Income accrued during year, none.	

FIXED CAPITAL.

Gas.

Structures	\$119,132.66
Trunk lines and mains	61,272.12
Gas services	24,887.26
Gas meters	<u>22,210.55</u>
Total cost of fixed capital—gas.....	\$227,502.59
Less reserve for depreciation	<u>5,354.95</u>
Total (net) value of fixed capital—gas.....	<u>\$222,147.64</u>

Electric.

Organization	\$5,284.57
Land:	
Building and real estate in Lakeport.....	46,715.73
Buildings and real estate in East Tilton.....	<u>263,007.48</u>
Machinery and apparatus:	
Machinery in Lakeport.....	97,750.13
Machinery in East Tilton.....	49,573.71
Poles and fixtures, lines.....	88,717.99
Transmission conductors—overhead, transmission line.....	16,493.72
Line transformers	21,447.62
Electric meters	<u>13,265.63</u>
Total cost of fixed capital—electric.....	\$602,256.58
Less reserve for depreciation.....	<u>11,040.81</u>
Total (net) value of fixed capital—electric.....	<u>\$591,215.77</u>

INCOME ACCOUNT.

Operating revenues:

Gas—

Commercial lighting)	
Municipal lighting)	\$29,481.48
Merchandise and jobbing revenue—(net)	<u>198.50</u>

Total—gas \$29,282.98

Electric—

Commercial lighting)	
Commercial power)	\$63,976.26
Merchandise and jobbing revenue (net)..	<u>1,114.49</u>

Total—electric 65,090.75

Total operating revenues \$94,373.73

Operating expenses:

Gas—

Production	\$10,651.79
Transmission and distribution.....	1,410.93
Insurance	416.16
General depreciation	1,474.07
Miscellaneous	4,412.72
Claims and law expenses.....	<u>472.28</u>

Total—gas \$18,837.95

Electric—		
Production	\$6,035.15	
Transmission and distribution.....	3,495.95	
Insurance	1,532.41	
General depreciation	3,198.81	
Miscellaneous	5,320.27	
Legal expenses and adjustments.....	844.75	
	<hr/>	
Total—electric	\$20,427.34	
Taxes	9,988.01	
	<hr/>	
Total revenue deductions		\$49,253.30
		<hr/>
Gross income		\$45,120.43
Deductions from gross income:		
Interest on funded debt.....	\$14,972.22	
Interest on unfunded debt.....	3,057.41	
	<hr/>	
Total deductions from gross income.....		18,029.63
		<hr/>
Net income		\$27,090.80
Surplus at beginning of year.....		11,355.12
		<hr/>
Total surplus		\$38,445.92
Net adjustments during year (Debit).....		4,521.13
		<hr/>
Adjusted balance (surplus).....		\$33,924.79
Dividends on preferred stock, 6%.....	\$13,800.00	
Dividends on common stock, 4¾%.....	11,875.00	
	<hr/>	
Total dividends		25,675.00
		<hr/>
Surplus at close of year.....		\$8,249.79

METER AND SERVICE DATA.

GAS.

Size of Meter.	Number in use at begin- ning of year.	Added during year.	Removed during year.	Number in use at close of year.
2-light	6	2	2	6
3-light	855	189	199	845
5-light	296	211	128	379
10-light	32	5	4	33
20-light	11	2	1	12
30-light	3	...	...	3
50-light	1	...	...	1
150-light	1	...	...	1

Street mains in use June 30, 1914:

	Wrought iron. ft.	Cast iron. ft.
1½-inch	51	.....
1¼-inch	227	.....
2-inch	20,433	.....
3-inch	9,147	14,598
4-inch	3,000	20,676
6-inch	175	14,890
8-inch	150	1,900
10-inch .....	.....	100

Number of service pipes in use, 1024; added, 46.

Consumers.

Number at beginning of year.....	1,117
Added during year.....	289
Discontinued during year.....	214
Number at close of year.....	1,292

Gas Made and Sold During the Year.

Number of feet on hand at beginning of year.....	46,200
Number of feet of gas made during the year:	
Water gas	19,437,600
Total gas made and on hand.....	19,483,800
Number of feet of gas sold by meter during the year.....	18,689,400
Number of feet of gas used at works and offices during the year	267,800
Number of feet of gas on hand at close of year.....	50,000
Total gas sold, used and on hand.....	19,007,200
Number of feet unaccounted for during the year.....	476,600

ELECTRIC.

Production and Sales.

Kilowatt hours generated.....	2,423,800
Kilowatt hours delivered at switchboard.....	2,423,800
Kilowatt hours sold during year.....	1,773,635
Kilowatt hours used by respondent.....	29,837
Kilowatt hours unaccounted for.....	620,328
Per cent, unaccounted for.....	25.5

SERVICES RENDERED.

	Laconia	Belmont	Meredith	Tilton	Sanbornton	Gilford
Number of consumers...	639	6	1	2	2	2
Number of meters in service	778	6	1	2	3	2
Connected load, Trans. kw. ....	...	160	50	5	15	5
Current supplied:						
Private consumers, kw. h.	740,319	139,848	.....	694	734	255
Municipal street lighting	181,205	.....	.....	...	...	...
Other municipal service	9,703	7,340	.....	...	...	...
Other public service corporations.	56,200	.....	101,700	...	...	...
Used by respondent..	29,837	.....	.....	...	...	...
Total current supplied.....	1,017,264	147,188	101,700	694	734	255

LANCASTER & JEFFERSON ELECTRIC COMPANY.

LANCASTER, N. H.

PRINCIPAL OFFICERS.

President, Frank B. Lewis; Treasurer, E. M. Bowker, Whitefield, N. H.

DIRECTORS.

Frank B. Lewis, E. M. Bowker, Van H. Dodge, Whitefield, N. H.

HISTORY.

Incorporated June 4, 1890; amended February 10, 1892, under the general laws of the State of New Hampshire.

LOCALITY SERVED.

Lancaster, N. H.

GENERAL BALANCE SHEET.

Assets.

Cost of plant	\$85,590.49
Cash	286.07
Accounts receivable	1,358.93
Materials and supplies	200.00
Prepaid insurance	20.16
Prepaid taxes	351.43
Deficit	8,061.18
Total	<u>\$95,868.26</u>

Liabilities.

Capital stock	\$40,000.00
Bonds	40,000.00
Matured interest on funded debt, unpaid	1,500.00
Matured interest on notes payable, unpaid	1,063.92
Notes payable	12,635.25
Accounts payable	669.09
Total	<u>\$95,868.26</u>

NOTE.—General balance sheet furnished by Union Safe Deposit and Trust Co., Trustee. Mortgagee in possession.

INCOME ACCOUNT.

Operating revenues	\$4,749.67
Operating expenses:	
Labor expense	\$1,593.26
Materials and other expense	1,243.24
Repairs to dam	6,294.79
Taxes	483.75
Total operating expenses	<u>9,615.04</u>
Net loss	\$4,865.37
Interest	\$2,710.16
Other payments	1,040.87
Total deductions	<u>3,751.03</u>
Loss for year	<u>\$8,616.40</u>

CENTRAL STATION EQUIPMENT.

	No.	Total capacity.
Boilers	3	245 h. p.
Steam engines	2	235 h. p.
Water wheels	4	
Alternating current generators	3	245 kw.

COMMERCIAL CONSUMERS.

Lighting.

Number of consumers: metered, 205; unmetered, 25; total.... 230

METERS AND TRANSFORMERS.

Number of lighting meters.....	215
Number of power meters.....	4
Number of heating meters.....	3
Number of transformers.....	45
Kilowatt capacity of transformers.....	175

LOAD DATA.

"Peak load" as maximum instantaneous demand, 77 kw.
Service is continuous throughout the day of 24 hours

LEBANON ELECTRIC LIGHT & POWER COMPANY.

LEBANON, N. H.

PRINCIPAL OFFICERS.

President, George S. Rogers, Lebanon, N. H.; Vice-President, Thos. W. Streeter, Concord, N. H.; Clerk and General Manager, Frank Collins, White River Junction, Vt.; Treasurer, Robert W. Sanford, Boston, Mass.; Superintendent, Herbert M. Tucker, Lebanon, N. H.

DIRECTORS.

George S. Rogers, Lebanon, N. H.; Thos. W. Streeter, Concord, N. H.; Chas. P. Chase, Hanover, N. H.; Philip Young, Boston, Mass.; Herbert M. Tucker, Carlos D. Smith, Lebanon, N. H.; Frank Collins, White River Junction, Vt.

HISTORY.

Incorporated September 14, 1908, under the general laws of the State of New Hampshire. Amended July 16, 1898.

CAPITALIZATION.

Capital stock, authorized and outstanding:	
Common, 360 shares, par value.....	\$18,000.00
Dividends declared during year.....	6,660.00
Number of stockholders, 8; number in New Hampshire, 5.	
Par value of stock held in New Hampshire.....	250.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$2,670.18	
Accounts receivable—electric	4,649.30	
Accounts receivable—sundry	500.00	
		\$7,819.48
Materials and supplies.....		3,531.83
Fixed capital		51,692.98
Prepayments		675.59
Total		\$63,719.88

Liabilities.

Current liabilities:		
Taxes accrued	\$200.39	
Bills payable (promissory notes).....	7,300.00	
Accounts payable	1,828.93	
		\$9,329.32
Capital stock—common		18,000.00
Surplus		36,390.56
Total		\$63,719.88

FIXED CAPITAL.

Plant and equipment	\$34,567.67
Land	
Structures	
Machinery and apparatus }	15,237.67
Electric services	
Line transformers }	5,559.64
Electric meters	
Total cost of fixed capital.....	\$55,364.98
Less reserve for depreciation	3,672.00
Total (net) value of fixed capital.....	\$51,692.98

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting	\$20,989.53	
Municipal lighting	3,080.44	
Merchandise and jobbing revenue—electric (net)	7,158.69	
Total operating revenues		\$31,228.66
Operating expenses:		
Production, transmission and distribution.	\$15,516.03	
Insurance	600.00	
General depreciation	3,374.32	
Miscellaneous	1,562.67	
Total operating expenses.....	\$21,053.02	
Taxes	760.57	
Uncollectible bills	49.90	
Total revenue deductions		21,863.49
Gross operating income.....		\$9,365.17
Deductions from gross income:		
Interest on unfunded debt		501.11
Net income		\$8,864.06
Surplus at beginning of year.....		35,027.14
Total surplus		\$43,891.20
Net adjustments during year (Debit).....		840.64
Adjusted balance		\$43,050.56
Dividends on common stock, 18½%.....		6,660.00
Surplus at close of year		\$36,390.56

CENTRAL STATION EQUIPMENT.

	Capacity.
Water wheel	250 h. p.
Steam engine	275 h. p.
Boiler	300 h. p.
Sub-station	(2) 150 kw. transformers
Poles:	
Wooden poles	545
Iron poles	10
Transformers:	
Total number	39
Total capacity	469
Street lamps:	
Multiple arc	6
Series incandescent	223

PRODUCTION AND SALES.

Kilowatt hours generated.....	514,446
Kilowatt hours purchased.....	115,910
Kilowatt hours delivered at switchboard.....	630,356
Kilowatt hours sold during year.....	415,866
Kilowatt hours unaccounted for.....	214,490
Per cent unaccounted for.....	34

SERVICES RENDERED.

Number of consumers	646
Number of meters in service.....	595
Current supplied:	
Private consumers	246,720 kw. h.
Municipal street lighting.....	38,766 kw. h.
Other public service corporations.....	130,380 kw. h.

THE LISBON LIGHT AND POWER COMPANY.

PRINCIPAL OFFICERS.

President, Ned G. English; Vice-President, George Brummer; Clerk and Treasurer, Wm. Wallace Oliver; Auditors, Ned G. English and George Brummer; General Manager, Wm. Wallace Oliver, Lisbon, N. H.

DIRECTORS.

Ned G. English, George Brummer, Wm. Wallace Oliver, Seth F. Hoskins, H. B. Moulton, Eugene E. Clark, Ward P. Aldrich, Lisbon, N. H.

HISTORY.

Incorporated December 13, 1899, amended April 24, 1902, under the general laws of the State of New Hampshire.

LOCALITIES SERVED.

Bath and Lisbon.

CAPITALIZATION.

Common capital stock authorized and outstanding, 450 shares, par value	\$45,000.00
Dividends declared during year, 6%.....	2,700.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$278.42
Accounts receivable	2,000.00
	<hr/>
Materials and supplies.....	\$2,278.42
Fixed capital—electric	296.97
Fixed capital—other departments	64,506.43
	<hr/>
Total	1,700.00
	<hr/>
Total	\$68,781.82

Liabilities.

Current liabilities	\$10,446.58
Reserve for depreciation.....	1,000.00
Capital stock	45,000.00
Surplus	12,335.24
	<hr/>
Total	\$68,781.82

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting		\$7,205.52
Municipal lighting		2,440.72
Commercial power		964.42
Other operating revenues		4.00
Total operating revenues.....		<u>\$10,614.66</u>
Operating expenses:		
Production, transmission and distribution..	\$3,008.91	
Insurance	55.00	
General depreciation	500.00	
Miscellaneous	885.39	
Total operating expenses.....		<u>\$4,349.30</u>
Taxes		936.44
Total revenue deductions.....		<u>\$5,285.74</u>
Net operating revenue.....		\$5,328.92
Non-operating revenues		83.52
Gross income		<u>\$5,245.40</u>
Deductions from gross income:		
Interest on funded debt.....		588.13
Net income		<u>\$4,657.27</u>

LINCOLN.

(See J. E. Henry & Sons Company.)

LOUDON ELECTRIC COMPANY.

LOUDON, N. H.

PARTNERSHIP.

Organized October, 1911.

John Swenson, George L. Theobald, N. E. Martin, E. D. Clough, Concord, N. H. Each has $\frac{1}{4}$ interest.

General Manager, E. D. Clough.

LOCALITY SERVED.

Loudon.

FIXED CAPITAL.

Cost of plant..... \$3,000.00

INCOME ACCOUNT.

Operating revenues		\$105.75
Operating expenses:		
Labor expense	}	\$45.37
Materials and other expense		
Taxes		62.53
Total operating expenses.....		<u>\$107.90</u>
Loss for year.....		\$2.15

MISCELLANEOUS STATISTICS.

Lighting consumers, unmetered..... 10
 Period during which service is furnished: dusk to 10 P. M.; 5 A. M. to daylight in winter.

LYMAN FALLS POWER COMPANY.

GROVETON, N. H.

PRINCIPAL OFFICERS.

President, John D. Clifford; Vice-President, George B. Bearce, Lewiston, Me.; Clerk, Harry Manser, Auburn, Me.; Treasurer and General Manager, Harry Stetson, Lewiston, Me.; Superintendent, E. H. Macloon, Groveton, N. H.

DIRECTORS.

John D. Clifford, George B. Bearce, Harry Stetson, Lewiston, Me.; W. W. Munroe, C. C. Wilson, W. A. Knight, Auburn, Me.; Harry U. True, Boston, Mass.

HISTORY.

Organized July 21, 1903, under the laws of the State of Maine.

LOCALITY SERVED.

Northumberland and Stratford, N. H.

CAPITALIZATION.

Capital stock, common:		
Authorized 1,000 shares, \$100,000.00; outstanding.....		\$63,000.00
Dividends declared during year, none.		
Number of stockholders, 19; number in New Hampshire. 5.		
Par value of stock held in New Hampshire.....		11,000.00
Funded debt:		
First mortgage bonds, 1904-1914, par value, authorized..		\$75,000.00
Outstanding, \$4,000.00; not held by respondent.....		68,500.00
Interest accrued and paid during year, 5%.....		200.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$2,381.68	
Accounts receivable	3,612.00	
		\$5,993.68
Fixed capital		193,913.63
Prepayments		520.36
Reacquired securities		68,500.00
Total		\$268,927.67

Liabilities.

Current liabilities:		
Bills payable (promissory notes).....		\$62,600.00
Funded debt		72,500.00
Capital stock—common		63,000.00
Surplus		70,827.67
Total		\$268,927.67

FIXED CAPITAL.

Land	\$10,000.00
Structures	101,827.38
Machinery and apparatus.....	59,950.76
Poles and fixtures.....	16,781.78
Miscellaneous expenditures during construction.....	5,353.71
Total cost of fixed capital.....	\$193,913.63

INCOME ACCOUNT.

Operating revenues:		
Commercial power		\$28,895.45

MANCHESTER TRACTION, LIGHT & POWER COMPANY. 361

Operating expenses:		
Production	\$8,842.88	
Transmission and distribution.....	1,381.25	
Insurance	540.11	
Miscellaneous	500.00	
Total operating expenses.....	\$11,264.24	
Taxes	722.35	
Total revenue deductions.....		\$11,986.59
Gross income		\$16,908.86
Deductions from gross income:		
Interest on funded debt.....	\$200.00	
Interest on unfunded debt.....	4,139.84	
Total deductions from gross income.....		4,339.84
Net income		\$12,569.02
Surplus at beginning of year.....		58,258.65
Surplus at close of year.....		\$70,827.67

PRODUCTION AND SALES.

Kilowatt hours generated	4,149,066
Kilowatt hours delivered at switchboard.....	4,149,066
Kilowatt hours sold during year.....	3,852,726
Kilowatt hours unaccounted for	296,340
Per cent unaccounted for.....	.076
Maximum load, October 15, 1913, 1,089 kw.	
Minimum load, June 21, 1914, 837 kw.	

SERVICES RENDERED.

	Northumber- land.	Stratford.
Number of consumers	2	1
Number of meters in service.....	2	1
Connected load	1,731.88	40
Current supplied:		
Private consumers	3,727,666	.....
Other public service corporations.....	80,320	44,740
Total current supplied.....	3,807,986	44,740

MANCHESTER TRACTION, LIGHT & POWER COMPANY.

46 HANOVER ST., MANCHESTER, N. H.

PRINCIPAL OFFICERS.

President, E. C. Foster; Vice-President and General Manager, J. Brodie Smith; Clerk, Edwin F. Jones, Manchester, N. H.; Treasurer, Philip L. Saltonstall, Boston, Mass.

DIRECTORS.

Elwin C. Foster, Manchester, N. H.; P. L. Saltonstall, Boston, Mass.; J. Brodie Smith, Edwin F. Jones, Charles M. Floyd, Walter M. Parker, Roger G. Sullivan, Wm. Parker Straw, Manchester, N. H.; Richard M. Saltonstall, Stillman F. Kelley, Boston, Mass.; Samuel P. Hunt, Manchester, N. H.; Frank S. Streeter, Concord, N. H.; Albert O. Brown, Manchester, N. H.; William A. Tucker, Boston, Mass.

HISTORY.

This company commenced operation March, 1881, under the name of Manchester Electric Light Company. Reorganized July 29, 1885, as the American Typographic Company; March 5, 1895, name changed to American Manufacturing Company; February 13, 1901, name changed to Manchester Traction, Light & Power Company; March 16, 1904, purchased all the assets of the Union Electric Company, Merrimack Electric Light, Heat & Power Company, Garvin's Falls Power Company, and the Consolidated Electric Company, consolidating the same.

LOCALITIES SERVED.

Manchester, Goffstown, Grasmere, Pembroke (Suncook), Allentown (Suncook), Hooksett, Londonderry, Litchfield, Merrimack.
Lines also extend into the towns of Auburn and Bow.

CAPITALIZATION.

Common stock, authorized and outstanding:

Authorized, 50,000 shares, \$5,000,000; outstanding, 28,000 shares, par value.....	\$2,800,000.00
Dividends declared and paid during year, 8%.....	224,000.00
Number of stockholders, 902; number in New Hampshire, 455.	
Par value of stock held in New Hampshire.....	893,300.00

Funded debt, authorized and outstanding:

Consolidated first mortgage bonds—

Manchester Traction, Light & Power Co., 1901-1921, par value authorized, \$2,000,000; par value outstanding	1,750,000.00
Manchester Electric Light Co., 1897-1917, par value authorized and outstanding.....	250,000.00
Interest accrued and paid during year, 5%.....	12,500.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:

Cash	\$51,008.95	
Bills receivable (Notes)	175,000.00	
Accounts receivable—electric	60,980.49	
Accounts receivable—sundry	9,671.89	
		\$296,661.33
Materials and supplies.....		51,658.61
Investments		2,116,750.00
Sinking funds		66,634.13
Fixed capital		2,979,273.79
Prepayments		8,379.03
Suspense		23,424.53
Reacquired securities		2,978.75

Total \$5,545,760.17

Liabilities.

Current liabilities:

Taxes accrued	\$2,621.88	
Interest accrued on funded debt.....	24,999.99	
Bills payable (promissory notes).....	332,000.00	
Consumers' deposits	1,868.50	
Accounts payable	17,141.07	

\$378,631.44

Funded debt	2,000,000.00
Capital stock—common	2,800,000.00
Surplus	367,128.73

Total \$5,545,760.17

SINKING FUND.

Manchester Electric Light Co. 5s.....	\$65,000.00
Coupons and interest.....	1,634.13
Total	\$66,634.13

SUSPENSE.

Flowage rights and expense of purchase of Nashua Light, Heat & Power Company	\$23,424.58
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INVESTMENTS.

Nature of Investment.	Carried on books at	Income accrued during year.
12,195 shares, Manchester Street Railway.....	\$1,699,250.00	\$73,170.00
2,400 shares Manchester & Nashua Street Railway	240,000.00	.....
1,750 shares Manchester & Derry Street Railway	175,000.00	.....
1,000 shares Ben Franklin Electric Company	2,500.00	.....
10 shares Garvins Falls Power Company		
10,000 shares Manchester Electric Company		
2,250 shares Manchester Electric Light Company		
2,500 shares Consolidated Electric Company		
2,000 shares Union Electric Company	2,500.00	.....
2,500 shares Merrimack Electric Light & Power Co.		
Total	\$2,116,750.00	\$73,170.00

FIXED CAPITAL.

Land and structures.....	\$93,550.45
Poles and fixtures	166,388.48
Transmission conductors—overhead	
Transmission conductors—underground	
Distribution system—overhead	
Distribution system—underground	32,353.67
Line transformers	
Electric meters	35,388.88
Plant	2,682,285.47
Stable and garage equipment	3,199.00
Total cost of fixed capital	\$3,013,165.95
Less reserve for depreciation.....	33,892.16
Total (net) value of fixed capital.....	\$2,979,273.79

INCOME ACCOUNT.

Operating revenues:	
Commercial lighting.....	\$256,427.00
Commercial power	201,170.98
Municipal lighting	71,055.76
Other operating revenues.....	9,276.97
Total operating revenues.....	\$537,930.71
Operating expenses:	
Production	\$40,599.37
Transmission and distribution.....	62,712.80
Insurance	8,550.00
General depreciation	28,784.35
Miscellaneous	30,039.48
Total operating expenses.....	\$170,686.00
Taxes	40,500.00
Uncollectible bills	1,237.40
Total revenue deductions.....	\$212,423.40
Gross operating income.....	\$325,507.31

Non-operating revenues:	
Income from investments.....	\$73,170.00
Other non-operating revenues.....	1,027.88
Net non-operating revenues.....	\$74,197.88
Gross income	\$399,705.19
Deductions from gross income:	
Interest on funded debt.....	\$100,000.00
Interest on unfunded debt	7,282.93
Total deductions from gross income.....	\$107,282.93
Net income	\$292,422.26
Surplus at beginning of year.....	300,994.49
Total surplus	\$593,416.75
Net adjustments during year (debit).....	2,288.02
Adjusted balance	\$591,128.73
Dividends on common stock, 8%.....	224,000.00
Surplus at close of year.....	\$367,128.73

MISCELLANEOUS STATISTICS.

Poles:	
Wooden poles	19,000
Iron poles	157
Transformers, total number of	1,158
Capacity in kilowatts	5,387,400
Street lamps:	
Street arc	590
Multiple arc	165
Series incandescent	413

PRODUCTION AND SALES.

Kilowatt hours generated.....	19,431,772
Kilowatt hours purchased	301,137
Kilowatt hours delivered at switchboard.....	19,431,772
Kilowatt hours sold during year.....	16,158,272
Kilowatt hours used by respondent.....	554,140
Kilowatt hours unaccounted for.....	3,273,500
Per cent unaccounted for.....	16.85
Maximum load, 4,840 kw., January 19, 1914.	
Minimum load, 245 kw., May 30, 1914.	

SERVICES RENDERED.

	Manches- ter.	Goffs- town.	Hook- sett.	Sun- cook.	Gras- mere.	London- derry.
Number of consum- ers	4,084	185	194	250	14	21
Number of meters in service	4,118	185	194	250	14	21
Connected load ..	9,566	...	...	...	..	..
Current supplied:						
Private consum- ers	6,386,077	...	...	...	..	..
Municipal street lighting	1,558,136	†25,826	†24,776	*†50,018	..	..
Other municipal service	65,829	...	...	...	..	..
Other public serv- ice corpora- tions	7,479,443	...	...	...	..	..
Used by respond- ent	554,140	...	...	...	..	..

*Includes Pembroke and Allentown.

†Kw. h. estimated.

MARLBORO ELECTRIC LIGHT, HEAT AND POWER COMPANY.

MARLBORO, N. H.

PRINCIPAL OFFICERS.

President, Henry L. Page, Clerk and Treasurer, W. S. Garfield, Superintendent, H. W. Hildreth, Marlboro, N. H.

DIRECTORS.

Henry L. Page, Harold W. Hildreth, Charles B. Collins, Lester G. Davis, Eli B. Knowlton, Marlboro, N. H.

LOCALITY SERVED.

Marlboro, N. H.

GENERAL BALANCE SHEET.

Assets.

Cost of plant	\$16,559.20
Cash	244.08
Items receivable	60.39
Materials and supplies.....	1,186.73
Loss	6,284.59
Total	<u>\$24,334.99</u>

Liabilities.

Capital stock	\$14,700.00
Items payable	9,634.99
Total	<u>\$24,334.99</u>

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings.....	\$1,024.00
Other earnings	2,166.69
Total operating revenues	<u>\$3,190.69</u>
Operating expenses:	
Labor expense	\$912.00
Materials and other expense.....	361.50
Taxes	210.00
Total operating expenses.....	<u>1,483.50</u>
Net earnings	<u>\$1,707.19</u>
Interest	\$524.47
Other payments	827.07
Total deductions	<u>1,351.54</u>
Profit for year	<u>\$355.65</u>

CENTRAL STATION EQUIPMENT.

	No.	Total capacity.
Water wheels	1	125 h. p.
Alternating current generators.....	1	75 kw.

COMMERCIAL CONSUMERS.

Total number of lighting consumers, all metered.....	86
--	----

METERS AND TRANSFORMERS.

Total number of lighting meters	86
Total number of transformers	13
Total kilowatt capacity of transformers	62 kw.

LOAD DATA.

Connected lighting load	86 kw.
Connected street lighting load	2 kw.
"Peak load" as maximum instantaneous demand	24 kw.
Period during which service is furnished: from sunset to sunrise.	
Schedule followed in street lighting: from dusk to daylight.	

MASCOMA ELECTRIC LIGHT & GAS COMPANY.

WHITE RIVER JUNCTION, VT.

PRINCIPAL OFFICERS.

President, Charles P. Chase, Hanover, N. H.; Vice-President, Thomas W. Streeter, Concord, N. H.; Clerk and General Manager, Frank Collins, White River Junction, Vt.; Treasurer, Robert W. Sanford, Boston, Mass.

DIRECTORS.

Charles P. Chase, Hanover, N. H.; Thomas W. Streeter, Concord, N. H.; Frank Collins, Wm. Russell, White River Junction, Vt.; Philip L. Saltonstall, Boston, Mass.

HISTORY.

Incorporated April 11, 1891, under special law of the State of New Hampshire as Mascoma Light, Heat, and Power Company. Name changed February 28, 1893.

LOCALITY SERVED.

Hartford, White River Junction and Wilder, Vt., Hanover, Meriden and West Lebanon, N. H.

CAPITALIZATION.

Common stock, authorized and outstanding:	
500 shares, authorized, 496 outstanding; par value, \$100 each total	\$49,600.00
Dividends declared and paid during year, 28%	13,888.00
Number of stockholders, 6; number in New Hampshire, 2.	
Par value of stock held in New Hampshire	200.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$172.67	
Accounts receivable—electric	5,627.62	
Accounts receivable—sundry	500.00	
		\$6,300.29
Fixed capital		150,350.65
Prepayments		1,127.14
Total		\$157,778.08

Liabilities.

Current liabilities:		
Bills payable (promissory notes)	\$77,900.00	
Accounts payable	1,169.82	
		\$79,069.82
Capital stock—common		49,600.00
Surplus		29,108.26
Total		\$157,778.08

FIXED CAPITAL.

Organization		\$1,000.00
Land	}	110,487.00
Structures		
Machinery and apparatus	}	25,795.61
Poles and fixtures		
Transmission conductors—overhead	}	18,363.04
Transmission conductors—underground		
Distribution system—overhead	}	5,295.00
Electric services		
Line transformers	}	155,645.65
Electric meters		
Total cost of fixed capital.....		\$155,645.65
Less reserve for depreciation.....		5,295.00
Total (net) value of fixed capital.....		\$150,350.65

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting	\$33,149.87	
Municipal lighting	4,985.67	
Merchandise and jobbing revenue—electric (net)	4,724.08	
Total operating revenues		\$42,859.62
Operating expenses:		
Production	}	\$17,814.03
Transmission and distribution		
Insurance		720.00
General depreciation		4,897.78
Miscellaneous		9,042.36
Total operating expenses		\$32,474.17
Taxes		1,363.09
Total revenue deductions.....		33,837.26
Gross operating income.....		\$9,022.36
Deductions from gross income:		
Interest on unfunded debt.....		4,653.58
Net income		\$4,368.78
Surplus at beginning of year.....		30,000.84
Total surplus		\$34,369.62
Net adjustments during year (Credit).....		194.64
Adjusted balance (Surplus).....		\$34,564.26
Dividends on common stock, 11%.....		5,456.00
Surplus at close of year.....		\$29,108.26

MISCELLANEOUS STATISTICS.

Poles:
 Wooden poles, 1,480.
 Transformers, 188.
 Street lamps, 363.

PRODUCTION AND SALES.

Kilowatt hours generated.....	977,595
Kilowatt hours purchased.....	130,380
Kilowatt hours delivered at switchboard.....	1,107,975
Kilowatt hours sold during year.....	557,968
Kilowatt hours unaccounted for.....	550,007
Per cent unaccounted for.....	49.6

SERVICES RENDERED.

	White River Jct.	Wilder.	Hartford.	Hanover.	W. Leb- anon.
Number of consumers.....	285	38	37	376	166
Number of meters in service..	272	36	34	370	163

McINDOE FALLS LIGHT & POWER COMPANY.

McINDOE FALLS, VT.

(Report for 9 months from October 1, 1913, to June 30, 1914.)

PRINCIPAL OFFICERS.

President, Don L. Judkins, Barnet, Vt.; Treasurer, J. M. Gibson, McIndoe Falls, Vt.

DIRECTORS.

Don L. Judkins, Barnet, Vt.; J. M. Gibson, Clara B. Gibson, McIndoe Falls, Vt.; Lottie Judkins, Barnet, Vt.

GENERAL BALANCE SHEET.

Assets.

Cost of plant	\$2,600.00
Items receivable	331.10
Total	\$2,931.10

Liabilities.

Capital stock	\$2,600.00
Items payable	317.62
Profit	13.48
Total	\$2,931.10

INCOME ACCOUNT.

Operating revenues	\$831.75
Operating expenses:	
Labor expense	\$166.70
Materials and other expense.....	519.47
Taxes	15.29
Total operating expenses.....	701.46
Net earnings	\$130.29

COMMERCIAL CONSUMERS.

Number of lighting consumers, metered 15; unmetered 25; total 40

METERS AND TRANSFORMERS.

Total number of lighting meters.....	11
Total number of power meters.....	2
Total number of transformers.....	20
Total kilowatt capacity of transformers.....	13 ½

LOAD DATA.

Period during which service is furnished: from twilight to dawn.
 Schedule followed in street lighting: flat rate \$2.00, 16 c. p. light.

MISCELLANEOUS STATISTICS.

Total power purchased: 1386 kw. h. in 9 months.

Purchased from Barnet Electric Light & Power Co., at rate of 5 cents per kw. h.

MEREDITH ELECTRIC LIGHT COMPANY.

MEREDITH, N. H.

(Location of Treasurers' Office, 16 Peck St., Providence, R. I.)

PRINCIPAL OFFICERS.

President, W. A. Griffith; Vice-President, W. J. Fogarty; General Manager, H. B. Rust; Treasurer, James A. Rogers, Providence, R. I.; Clerk, F. M. Beckford, Laconia, N. H.; Local Manager, Mary A. Pynn, Meredith, N. H.

DIRECTORS.

W. A. Griffith, R. L. Griffith, W. J. Fogarty, H. B. Rust, J. A. Rogers, Providence, R. I.

LOCALITY SERVED.

Meredith, N. H.

GENERAL BALANCE SHEET.

Assets.

Cost of plant.....	\$13,415.91
Cash	62.73
Items receivable	617.41
Sinking fund	696.63
Materials and supplies.....	102.55
Loss	6,979.04
Total	\$21,874.27

Liabilities.

Capital stock	\$16,000.00
Bonds	5,000.00
Items payable	874.27
Total	\$21,874.27

INCOME ACCOUNT.

Operating revenues:		
Municipal street lighting earnings.....	\$1,137.18	
Other earnings	4,491.10	
Total operating revenues.....		\$5,628.28
Operating expenses:		
Labor expense	\$218.71	
Materials and other expense.....	4,276.82	
Taxes	125.40	
Total operating expenses.....		4,620.93
Net earnings		\$1,007.35
Interest	\$250.00	
Other payments	180.00	
Total deductions		\$430.00
Profit for year.....		\$577.35
Loss at beginning of year.....		7,556.39
Loss at close of year.....		\$6,979.04

COMMERCIAL CONSUMERS.

Number of lighting consumers (all metered).....	68
Number of power consumers (all metered).....	15

METERS AND TRANSFORMERS.

Total number of lighting meters	95
Total number of power meters	11
Total number of transformers	37
Total kilowatt capacity of transformers	174

LOAD DATA.

Service continuous throughout the day of 24 hours.
 Schedule followed in street lighting: one-half hour after sunset to 12.30 A. M.

STATISTICS OF POWER GENERATION.

Total kw. h. purchased.....	236,700
Purchased from Laconia Gas & Electric Company.	

MERIDEN ELECTRIC LIGHT & POWER COMPANY.

MERIDEN, N. H.

PRINCIPAL OFFICERS.

President, Charles A. Tracy; Secretary, Frank M. Howe; Superintendent and Treasurer, Harold W. Chellis, Meriden, N. H.

DIRECTORS.

Charles A. Tracy, Frank M. Howe, Alvah B. Chellis, Nathan R. Andrews, Harold W. Chellis, Meriden, N. H.

HISTORY.

Incorporated August 20, 1910, under the general laws of the State of New Hampshire.

LOCALITY SERVED.

Meriden, N. H.

GENERAL BALANCE SHEET.

Assets.

Cost of plant.....	\$4,093.64
Cash	4.00
Items receivable	7.77
Materials and supplies.....	15.00
Total	<u>\$4,120.41</u>

Liabilities.

Capital stock	\$3,900.00
Investment	162.01
Profit	58.40
Total	<u>\$4,120.41</u>

INCOME ACCOUNT.

Operating revenues:	
Total earnings	\$1,097.60

Operating expenses:	
Labor expense	\$58.00
Materials and other expense.....	840.64
Taxes	31.01
Total operating expenses.....	\$929.65
Net earnings	\$167.95
Dividends	167.30
Profit for year .....	.65
Profit at beginning of year.....	57.75
Profit at close of year.....	\$58.40

COMMERCIAL CONSUMERS.

Number of lighting consumers, metered 19, unmetered 1, total	20
Number of power consumers (all metered).....	2

METERS AND TRANSFORMERS.

Total number of lighting meters	22
Total number of power meters	1
Total number of transformers	11
Total kilowatt capacity of transformers.....	45

LOAD DATA.

Connected lighting load	30 kw.
Connected power load	12 kw.
Service is continuous throughout the day of 24 hours.	

STATISTICS OF POWER GENERATION.

Total kw. h. purchased.....	18,274
Purchased of Mascoma Electric Light & Gas Co.	

MILFORD LIGHT & POWER COMPANY.

MILFORD N. H.

PRINCIPAL OFFICERS.

President, Philip H. Farley, Boston, Mass.; Clerk and Superintendent,
A. A. Murray, Milford, N. H.; Treasurer, William H. Burgess, Boston, Mass.

DIRECTORS.

Philip H. Farley, William H. Burgess, Howard W. Lang, Joseph P.
Hines, Boston, Mass.; A. A. Murray, Milford, N. H.

HISTORY.

Incorporated February 27, 1908, under the general laws of the State of
New Hampshire. Amended February 11, 1910; May 13, 1911; January
22, 1912. Purchased assets of Milford Electric Light Company.

LOCALITY SERVED.

Milford, Wilton, Amherst, Mont Vernon, N. H.

CAPITALIZATION.

Capital stock, authorized and outstanding:	
Common, 1,500 shares, par value.....	\$150,000.00
Preferred, 650 shares, par value.....	65,000.00

Dividends declared and paid during year:	
Common, none; preferred, 7%; total.....	\$4,550.00
Number of stockholders, 61; number in New Hampshire, 26.	
Par value of stock held in New Hampshire.....	\$31,200.00
Funded debt, authorized and outstanding:	
First mortgage bonds 1908-1938.....	\$148,500.00
Interest accrued and paid during year, 7%.....	7,500.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$3,432.00
Accounts receivable	3,978.77
	<hr/>
	\$7,410.77
Materials and supplies.....	3,172.21
Fixed capital—land and buildings.....	366,823.79
Suspense	1,243.66
Deficit	2,665.84
	<hr/>
Total	\$381,316.27

Liabilities.

Current liabilities:	
Taxes accrued	\$1,084.00
Interest accrued on funded debt.....	3,125.00
Bills payable (promissory notes).....	10,500.00
Accounts payable	832.25
Dividends payable	2,275.02
	<hr/>
	\$17,816.27
Funded debt	148,500.00
Capital stock—preferred	65,000.00
Capital stock—common	150,000.00
	<hr/>
Total	\$381,316.27

SUSPENSE.

Express coal bill during installation of new water wheels, by permission Public Service Commission.....	\$1,243.66
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FIXED CAPITAL.

Organization	\$8,120.44
Royalties, franchises and licenses.....	4,505.00
Land	62,185.33
Machinery and apparatus.....	196,191.97
Poles and fixtures.....	63,343.85
Line transformers }	31,235.92
Electric meters }	
General equipment	1,241.28
	<hr/>
Total cost of fixed capital.....	\$366,823.79

INCOME ACCOUNT.

Operating revenues:	
Commercial lighting	\$15,548.51
Commercial power	9,180.50
Municipal lighting	6,044.82
	<hr/>
Total operating revenues.....	\$30,773.83
Operating expenses:	
Production	\$8,465.75
Transmission and distribution.....	749.73
Insurance	566.50
Miscellaneous	5,757.89
	<hr/>
Total operating expenses.....	\$15,539.87
Taxes	2,609.73
	<hr/>
Total revenue deductions.....	18,149.60
	<hr/>
Gross operating income.....	\$12,624.23

Non-operating revenues:	
Rent from, real estate.....	\$540.00
Other non-operating revenues.....	36.00
Net non-operating revenues.....	\$576.00
Gross income	\$13,200.23
Deductions from gross income:	
Interest on funded debt	\$7,500.00
Interest on unfunded debt	942.79
Total deductions from gross income.....	8,442.79
Net income	\$4,757.44
Deficit at beginning of year.....	2,873.28
Adjusted balance—surplus	\$1,884.16
Dividends on preferred stock, 7%.....	4,550.00
Deficit at close of year.....	\$2,665.84

MISCELLANEOUS STATISTICS.

Poles: wooden poles, 732.

PRODUCTION AND SALES.

Kilowatt hours generated	738,060
Kilowatt hours delivered at switchboard.....	738,060
Kilowatt hours sold during year.....	557,186
Kilowatt hours unaccounted for	180,874
Per cent unaccounted for.....	24 1/2
Maximum load, 280 kw., November 29, 1913.	
Minimum load, 25 kw., July 17, 1913.	

SERVICES RENDERED.

	Milford.	Wilton.	Amherst.	Vernon.
Number of consumers	314	84	35	42
Number of meters in service..	286	69	33	41
Current supplied:				
Private consumers.....	465,726	17,075	5,925	4,567
Municipal street lighting...	38,500	6,825	6,200	6,612
Other municipal service....	3,929	1,285	355	187
Total current supplied...	508,155	25,185	12,480	11,366

NASHUA LIGHT, HEAT & POWER COMPANY.

NASHUA, N. H.

PRINCIPAL OFFICERS.

President, F. W. Estabrook; Clerk, James H. Tolles; Treasurer, Elbert Wheeler; Superintendent Gas Department, W. F. Norton; Superintendent Electric Department, G. L. Sadler, Nashua, N. H.

DIRECTORS.

F. W. Estabrook, F. E. Anderson, James H. Tolles, G. E. Anderson, Elbert Wheeler, Nashua, N. H.

HISTORY.

Incorporated June 28, 1850, as Nashua Gas Light Co., under special law of the State of New Hampshire. Charter amended and name changed July 21, 1887. Consolidated with Nashua Electric Light Co. in 1889.

LOCALITIES SERVED.

Nashua and Hudson, N. H.

CAPITAL STOCK.

Common, authorized and outstanding, 6,000 shares, par value	\$600,000.00
Dividends declared and paid during year, 8%.....	48,000.00
Number of stockholders 375, number in New Hampshire 309.	
Par value of stock held in New Hampshire.....	\$444,900.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$13,391.96	
Accounts receivable—gas	614.16	
Accounts receivable—electric	562.10	
Accounts receivable—sundry	12,872.00	
		\$27,440.22
Materials and supplies.....		37,064.96
Fixed capital—gas		409,882.50
Fixed capital—electric		449,950.70
Fixed capital—other departments		13,392.43
Prepayments		473.13
Real estate not used for manufacturing purposes.....		14,258.66
Total		\$952,462.60

Liabilities.

Current liabilities:		
Taxes accrued	\$4,800.00	
Interest accrued on unfunded debt.....	929.17	
Bills payable (promissory notes).....	45,000.00	
Consumers' deposits	432.14	
Accounts payable	325.46	
		\$51,486.77
Reserve for depreciation.....		137,142.52
Optional reserves		1,532.93
Capital stock—common		600,000.00
Surplus		162,300.38
Total		\$952,462.60

FIXED CAPITAL.

Gas.

Land	\$26,000.00
Structures	145,658.42
Machinery and apparatus.....	81,550.96
Trunk lines and mains.....	98,100.79
Gas services	28,447.64
Gas meters	27,260.12
General equipment	2,864.57
Total cost of fixed capital—gas.....	\$409,882.50
Less reserve for depreciation and ren. reserve.....	21,237.12
Total (net) value of fixed capital—gas.....	\$388,645.38

Electric.

Land	\$25,000.00
Structures	50,368.57
Machinery and apparatus.....	156,703.28
Underground distribution system.....	1,500.00
Overhead distribution system.....	120,254.15
Electric services	20,237.88
Line transformers	31,692.43
Electric meters	19,200.32
Arc lamps and glower lamps.....	9,644.06

Municipal street lighting system.....	\$12,508.43
General equipment	2,841.58
Total cost of fixed capital—electric.....	<u>\$449,950.70</u>
Less reserve for depreciation and ren. reserve.....	115,905.40
Total (net) value of fixed capital—electric.....	<u>\$334,045.30</u>

INCOME ACCOUNT.

Operating revenues:

Gas—		
Commercial lighting	\$80,420.99	
Merchandise and jobbing revenue—gas (net)	1,195.92	
Other operating revenues—gas.....	22,681.53	
Total operating revenues—gas.....	<u>\$104,298.44</u>	
Electric—		
Commercial lighting	\$59,245.32	
Commercial power	42,612.14	
Municipal lighting	32,269.19	
Merchandise and jobbing revenue—elec- tric (net)	894.37	
Total operating revenues—electric....	<u>\$135,021.02</u>	
Total operating revenues.....		<u>\$239,319.46</u>

Operating expenses:

Gas—		
Production	\$53,596.29	
Transmission and distribution.....	14,544.08	
Insurance	224.69	
General depreciation and renewal reserve	8,132.86	
Miscellaneous	763.63	
Total operating expenses—gas.....	<u>\$77,261.55</u>	
Electric—		
Production	\$38,346.71	
Transmission and distribution.....	20,731.43	
Insurance	833.85	
General depreciation	27,296.32	
Miscellaneous	964.05	
Total operating expenses—electric....	<u>\$88,172.36</u>	
Taxes	\$24,043.85	
Uncollectible bills	322.96	
Total revenue deductions.....		<u>\$189,800.72</u>
Gross operating income.....		<u>\$49,518.74</u>

Non-operating revenues:

Rent from real estate.....	\$1,320.00	
Non-operating expenses.....	853.87	
Net non-operating revenues.....		<u>466.13</u>
Gross income		<u>\$49,984.87</u>
Deductions from gross income.....		3,173.00
Net income		<u>\$46,811.87</u>
Surplus at beginning of year.....		164,077.39
Total surplus		<u>\$210,889.26</u>
Net adjustments during year (debit).....		588.88
Adjusted balance (surplus).....		<u>\$210,300.38</u>
Dividends on common stock.....		48,000.00
Surplus at close of year.....		<u>\$162,300.38</u>

Gas.

METER AND SERVICE DATA.

Size of Meter.	Number in use at beginning of year.	Added during year.	Removed during year.	Number in use at close of year.
3-light	3,359	951	808	3,502
5-light	388	94	84	398
10-light	61	4	10	55
20-light	33	6	4	35
30-light	11	3	1	13
50-light	2	...	1	1
60-light	1	...	...	...
200-light .....	....	1	...	1

Size of Mains.	Cast iron ft.	Wrought iron ft.
2-inch .....	.....	114,841
3-inch	3,865	.....
4-inch	62,221	.....
6-inch	36,301	.....
8-inch	12,475	.....
10-inch	1,650	.....
16-inch	360	.....

Number of service pipes in use..... 2,941

Consumers:

Number at beginning of year.....	3,855
Added during year.....	1,059
Discontinued during year.....	908
Number at close of year.....	4,006

Gas Made and Sold During the Year.

Number of feet on hand at beginning of year.....	288,600
Number of feet of gas made during the year:	
Coal gas	69,488,800
Water gas	4,479,200
Total gas made.....	73,968,000
Total gas made and on hand.....	74,256,600
Number of feet of gas sold by meter during the year.....	67,245,100
Number of feet of gas used at works and offices during the year	1,300,000
Number of feet of gas on hand at close of year.....	253,604
Total gas sold, used and on hand.....	68,798,704
Number of feet unaccounted for during the year.....	5,457,896

Electric.

PRODUCTION AND SALES.

Kilowatt hours generated	3,540,808
Kilowatt hours delivered at switchboard.....	3,540,808
Kilowatt hours sold during year.....	2,935,099
Kilowatt hours used by respondent	37,350
Kilowatt hours unaccounted for	568,359
Per cent, unaccounted for.....	16
Maximum load, 1200 kw., December 10, 1913.	
Minimum load, 40 kw., July 20, 1913.	

SERVICES RENDERED.

	Nashua.	Hudson.
Number of consumers	1,374	75
Number of meters in service.....	1,374	75
Connected load, kw.....	2,050	47

Current supplied:	Kw. h.	Kw.h.
Private consumers.....	2,273,517	11,518
Municipal street lighting.....	636,600	4,140
Other municipal service.....	9,195	129
Used by respondent.....	37,350	.....
Total current supplied.....	2,936,662	15,787

NEW HAMPSHIRE WATER AND ELECTRIC POWER COMPANY OF NEW HAMPSHIRE.

FITZWILLIAM, N. H.

Main Office, 50 Congress St., Boston, Mass.

HISTORY.

Incorporated December 21, 1911, under general laws of New Hampshire.

LOCALITIES SERVED.

Fitzwilliam and Troy.

PRINCIPAL OFFICERS.

President, John S. Blair, Fitzwilliam, N. H.; Treasurer, R. L. Pond, Jr., Boston, Mass.; Clerk, Chas. A. Madden, Keene, N. H., Superintendent, Jos. Hickey, Fitzwilliam Depot, N. H.

DIRECTORS.

John S. Blair, Fitzwilliam, N. H.; R. L. Pond, Jr., Boston, Mass.; J. W. Tewksbury, Brookline, Mass.

GENERAL BALANCE SHEET.

Assets.

Cost of plant	\$64,111.42
Cash	18.73
Items receivable	3,915.10
Materials and supplies.....	1,724.04
Total	\$69,769.29

Liabilities.

Capital stock	\$32,600.00
Items payable	32,748.45
Profit	4,420.84
Total	\$69,769.29

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings.....	\$936.57
Other earnings	5,029.60
Total operating revenues.....	\$5,966.17

Operating expenses:	
Labor expense	\$2,888.40
Materials and other expense	4,869.36
Taxes	425.51
Total operating expenses	<u>\$8,183.27</u>
Loss for year	\$2,217.10
Surplus at beginning of year	1,390.25
Adjustments during year*	5,247.69
Profit at close of year	4,420.84

COMMERCIAL CONSUMERS.

Lighting consumers	126
Power consumers	5

METERS AND TRANSFORMERS.

Total number of lighting meters	107
Total number of power meters	5
Total number of transformers	37
Total kilowatt capacity of transformers	259½

LOAD DATA.

Connected lighting load	89	kw.
Connected power load	130.55	kw.
Connected street lighting load:		
50, 40 c. p. 5.5 amp. Tungsten series Inc.		
40, 32 c. p. 5.5 amp. Tungsten series Inc.		
"Peak load" as maximum instantaneous demand	125	kw.
Service is continuous throughout the day of 24 hours.		
Schedule followed in street lighting: all night every night.		

MISCELLANEOUS STATISTICS.

Total kw. h. purchased: 295,095.
Purchased from Connecticut River Transmission Co.
Rate: Temporary rate 11 mills, later to be 16 mills per kw. h.

NEW HAMPTON ELECTRIC LIGHT & POWER COMPANY.

NEW HAMPTON, N. H.

PRINCIPAL OFFICERS.

President, Geo. A. Emerson, Bristol, N. H.; Secretary and Treasurer,
Charles D. Thyng, New Hampton, N. H.

DIRECTORS.

Geo. A. Emerson, Bristol, N. H.; I. E. Gray, Concord, N. H.; M. H.
Morrow, F. P. Morrill, Carrie R. Morrill, New Hampton, N. H.

HISTORY.

Organized November 1, 1889; organized under the laws of the State
of New Hampshire.

LOCALITY SERVED.

New Hampton, N. H.

*This item has been the subject of correspondence with the company.
The company in error charged into plant property purchased in excess of the
value approved by the commission for capitalization. A correction of the mis-
take will be made in the 1915 report by a charge to Profit and Loss.

NEWMARKET ELECTRIC COMPANY.

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GENERAL BALANCE SHEET.

Assets.

Cost of plant	\$4,000.00
Cash	428.13
Items receivable	50.91
Materials and supplies	25.00
Total	<u>\$4,504.04</u>

Liabilities.

Capital stock	\$4,000.00
Items payable	25.00
Profit	479.04
Total	<u>\$4,504.04</u>

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings.....	\$330.00
Other earnings	1,170.00
Total operating revenues.....	<u>\$1,500.00</u>
Operating expenses:	
Labor expense	\$51.00
Materials and other expense.....	25.00
Taxes	9.30
Cost of current	1,174.43
Total operating expenses.....	<u>1,259.73</u>
Net earnings	\$240.27
Dividends declared	200.00
Profit for year	<u>\$40.27</u>

COMMERCIAL CONSUMERS.

Number of lighting consumers, metered 8, unmtered, 14; total	22
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METERS AND TRANSFORMERS.

Total number of lighting meters.....	7
Total number of transformers.....	21
Total kilowatt capacity of transformers.....	42 1/2

STATISTICS OF POWER GENERATION.

Power purchased from Bristol Electric Light Company.

NEWMARKET ELECTRIC COMPANY.

NEWMARKET, N. H.

PRINCIPAL OFFICERS.

President, Edwin G. Eastman, Assistant Clerk, John Scammon, Exeter, N. H.; Clerk, Horace Mitchell, Kittery, Me.; Treasurer, William H. C. Follansby, Exeter, N. H.; Auditors, F. B. Philbrick and S. J. Woodman, General Manager, F. D. Philbrick, Newmarket, N. H.

DIRECTORS.

E. G. Eastman, Exeter, N. H.; F. B. Philbrick, S. J. Woodman, Newmarket, N. H.; John Scammon, W. H. C. Follansby, Exeter, N. H.

HISTORY.

Organized April 1, 1911, under the laws of the State of Maine.

LOCALITIES SERVED.

Newmarket, Durham, Newfields, Epping and Brentwood, N. H.

CAPITAL STOCK.

Preferred	\$1,000.00
Common	100,000.00
Dividends paid during year, none.	
Number of stockholders, 17; number in New Hampshire, 17.	
Par value of stock held in New Hampshire.....	101,000.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$1,349.31	
Bills receivable	50.00	
Accounts receivable—electric	1,850.91	
Accounts receivable—sundry	200.00	
		\$3,450.22
Materials and supplies.....		3,400.00
Fixed capital		100,000.00
Prepayments		125.00
Deficit		2,974.78
Total		\$109,950.00

Liabilities.

Current liabilities:		
Interest accrued on unfunded debt.....	\$200.00	
Bills payable	8,000.00	
Accounts payable	750.00	
		\$8,950.00
Capital stock—preferred		1,000.00
Capital stock—common		100,000.00
Total		\$109,950.00

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting	\$12,810.34	
Commercial power	300.00	
Municipal lighting	5,325.00	
Merchandise and jobbing revenue—electric (net)	1,882.36	
Total operating revenues		\$20,317.70
Operating expenses:		
Production	\$8,500.00	
Transmission and distribution.....	5,700.00	
Insurance	442.58	
Miscellaneous	1,000.00	
Total operating expenses.....	\$15,642.58	
Taxes	284.13	
Total revenue deductions		15,926.71
Gross operating income.....		\$4,390.99
Non-operating revenues:		
Interest on unfunded debt.....		460.42
Net income		\$3,930.57
Deficit at beginning of year.....		6,845.35
Adjusted balance		\$2,914.78
Dividends on preferred stock, 6%.....		60.00
Deficit at close of year		\$2,974.78

METER AND SERVICE DATA.

Size of Meter.	Number in use at begin- ning of year.	Added during year.	Number in use at close of year.
10-light	150	5	155
20-light	85	2	87
45-light	9	..	9
150-light	2	..	2
Consumers:			
Number at beginning of year.....			330
Added during year.....			20
Number at close of year.....			350
Street lamps:			
Number at beginning of year.....			300
Added during year			5
Number at close of year.....			305

MISCELLANEOUS STATISTICS.

Number of miles of overhead circuit, 47.
Poles, wooden, 2,200.
Transformers, 89.

SERVICES RENDERED.

	New- market.	Durham.	New- fields.	Epping.	Brent- wood.
Number of consumers.....	156	78	15	75	1
Number of meters in service	116	55	6	48	0

NEWMARKET ELECTRIC LIGHT, HEAT AND POWER
COMPANY.

NEWMARKET, N. H.

PRINCIPAL OFFICERS.

President, Fred B. Philbrick, Treasurer, S. J. Woodman, Clerk, P. A. Morse, Newmarket, N. H.

DIRECTORS.

Fred B. Philbrick, S. J. Woodman, P. A. Morse, A. C. Haines, A. W. Griffeth, Newmarket, N. H.; Perley Gardner, Edwin G. Eastman, Exeter, N. H.

HISTORY.

Incorporated April 11, 1891. Charter revived February 23, 1897; amended February 26, 1897. Incorporated under special law of the State of New Hampshire. The company commenced business in about 1901. In 1905 a receiver was appointed, which receivership was continued until March, 1911, at which time the receiver was discharged and the plant leased to the Newmarket Electric Company at an annual rental of \$1,000, the lessee to make all repairs, extensions and permanent improvements without expense to the lessor.

GENERAL BALANCE SHEET.

Assets.

Cost of plant	\$38,289.76
Cash	32.24
Total	\$38,322.00

Liabilities.

Capital stock	\$22,000.00
Bonds	16,000.00
Items payable	114.76
Profit	207.24
Total	\$38,322.00

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings.....	\$1,000.00
Operating expenses:	
Interest	800.00
Profit for year	\$200.00
Profit at beginning of year.....	7.24
Profit at close of year.....	\$207.24

NEWPORT ELECTRIC LIGHT COMPANY.

NEWPORT, N. H.

PRINCIPAL OFFICERS.

President and Treasurer, George E. Lewis, Newport, N. H.; Vice-President, F. L. Houghton, Brattleboro, Vt.; Clerk, W. W. Safford; General Manager, M. W. Tenney, Newport, N. H.

DIRECTORS.

George E. Lewis, Newport, N. H.; F. L. Houghton, J. B. Manley, H. D. Walker, W. H. Vinton, Brattleboro, Vt.

HISTORY.

Incorporated June 28, 1892, under the general laws of the State of New Hampshire. Amended October 18, 1902; June 21, 1909.

LOCALITY SERVED.

Newport, N. H.

CAPITALIZATION.

Capital stock, authorized and outstanding:	
Common, 850 shares, par value authorized \$85,000.00,	
outstanding	\$70,000.00
Dividends declared during year, 8%.....	5,300.00
Number of stockholders, 1, in New Hampshire.	

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$306.32
Bills receivable (notes).....	800.00
Accounts receivable—electric	2,740.48
Accounts receivable—sundry	368.75
	\$4,215.55
Materials and supplies.....	3,340.52
Investments	20,000.00
Fixed capital	90,620.74
Total	\$118,176.81

Liabilities.

Current liabilities:	
Accounts payable	\$921.88
Capital stock—common	70,000.00
Surplus	47,254.93
Total	<u>\$118,176.81</u>

INVESTMENTS.

Stock of Sunapee Electric Light and Power Company....	\$20,000.00
Income accrued during year.....	462.67

FIXED CAPITAL.

Structures	\$9,175.00
Machinery and apparatus.....	46,631.75
Poles and fixtures.....	3,566.22
Distribution system—overhead	7,584.38
Electric services	5,493.74
Line transformers	6,660.76
Electric meters	6,456.97
Municipal street lighting system.....	5,051.92
Total cost of fixed capital.....	<u>\$90,620.74</u>

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting	\$13,343.58	
Commercial power	15,793.32	
Municipal lighting	1,816.20	
Other operating revenues—electric.....	3,469.56	
Total operating revenues.....		<u>\$34,422.66</u>
Operating expenses:		
Production	\$19,164.13	
Transmission and distribution.....	2,634.49	
Insurance	606.63	
Total operating expenses.....	<u>\$22,405.25</u>	
Taxes	2,294.96	
Uncollectible bills	27.26	
Total revenue deductions.....		<u>24,727.47</u>
Gross operating income.....		<u>\$9,695.19</u>
Non-operating revenues:		
Income from investments.....	\$462.67	
Other non-operating revenues.....	134.08	
Total non-operating revenues.....	<u>\$596.75</u>	
Non-operating expenses	<u>4,772.33</u>	
Net non-operating deficit.....		<u>4,175.58</u>
Gross income		<u>\$5,519.61</u>
Deductions from gross income:		
Interest on unfunded debt.....		45.00
Net income		<u>\$5,474.61</u>
Surplus at beginning of year.....		<u>47,080.32</u>
Total surplus		<u>\$52,554.93</u>
Dividends on common stock, 8%.....		<u>5,300.00</u>
Surplus at close of year.....		<u>\$47,254.93</u>

MISCELLANEOUS STATISTICS.

Poles:

Wooden poles, about 500.
Transformers, 55.
Street lamps in use, 265.

PRODUCTION AND SALES.

Kilowatt hours generated	1,204,008
Kilowatt hours delivered at switchboard.....	1,204,008
Kilowatt hours sold during year.....	1,064,924.6
Kilowatt hours used by respondent.....	13,678
Kilowatt hours unaccounted for	125,405.4
Per cent unaccounted for.....	10.4
Maximum load, 5,642 kw., February 25, 1914.	
Minimum load, 525 kw., May 31, 1914.	

SERVICES RENDERED.

Number of consumers	517
Number of meters in service.....	505
Connected load	3,650 kw.
Current supplied:	
Private consumers	kw. h. 887,127.3
Municipal street lighting.....	21,552
Other municipal service.....	2,279.3
Other public service corporations.....	153,966
Used by respondent.....	13,678
Total current supplied.....	1,078,602.6

PENACOOK ELECTRIC LIGHT COMPANY.

PENACOOK, N. H.

PRINCIPAL OFFICERS.

President, A. C. Alexander; Clerk, W. G. Buxton; Treasurer, A. G. Harris; Auditors, H. C. Rolfe and H. G. Rolfe; Superintendent, R. L. Harris, Penacook, N. H.

DIRECTORS.

A. C. Alexander, W. G. Buxton, R. L. Harris, A. G. Harris, H. C. Rolfe, Penacook, N. H.

HISTORY.

Incorporated July 21, 1891, under the general laws of the State of New Hampshire. Amended February 2, 1892; January 9, 1900; November 26, 1901; February 3, 1911.

LOCALITY SERVED.

Concord and Boscawen, N. H.

CAPITAL STOCK.

Common, authorized, and outstanding:	
400 shares, par value \$100 per share, total.....	\$40,000.00
Dividends declared during year, 8%.....	3,200.00
Number of stockholders, 24; number in New Hampshire, 18.	
Par value of stock held in New Hampshire.....	39,200.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$1,983.95	
Accounts receivable	2,770.65	
		<hr/>
		\$4,754.60
Materials and supplies		1,878.19
Sinking funds		4,130.00
Fixed capital		50,462.23
		<hr/>
Total		\$61,225.02

Liabilities.

Current liabilities:		
Taxes accrued	\$539.10	
Accounts payable	1,338.19	
Dividends payable	1,600.00	
		<hr/>
		\$3,477.29
Sinking fund reserves		4,130.00
Capital stock—common		40,000.00
Surplus		13,617.73
		<hr/>
Total		\$61,225.02

CONTINGENT FUND.

Cash deposited in Savings Bank	\$4,130.00
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FIXED CAPITAL.

Land	\$4,750.00
Structures	9,224.69
Machinery and apparatus	18,132.79
Distribution system—overhead	18,354.75
	<hr/>
Total	\$50,462.23

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting	\$7,062.99	
Commercial power	1,293.46	
Municipal lighting	2,276.63	
Merchandise and jobbing revenue—electric		
(net)	291.21	
Other operating revenues	41.85	
		<hr/>
Total operating revenues		\$10,966.14
Operating expenses:		
Transmission and distribution }	\$3,824.13	
Production		
Insurance	393.37	
General depreciation	1,000.00	
Miscellaneous	987.91	
		<hr/>
Total operating expenses	\$6,205.41	
Taxes	539.10	
		<hr/>
Total revenue deductions		6,744.51
		<hr/>
Net income		\$4,221.63
Surplus at beginning of year		12,596.10
		<hr/>
Total surplus		\$16,817.73
Dividends		3,200.00
		<hr/>
Surplus at close of year		\$13,617.73

PRODUCTION AND SALES.

Kilowatt hours generated	604,440 (estimate)
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SERVICES RENDERED.

Number of consumers	289
Number of meters in service.....	268

PETERBOROUGH.

(See Ashuelot Gas & Electric Co. and Keene Gas & Electric Co.)

PITTSFIELD LIGHT & POWER COMPANY.

PITTSFIELD, N. H.

PRINCIPAL OFFICERS.

President, Frank D. Hutchins; Secretary, George H. Colbath, Pittsfield, N. H.; Treasurer, Charles F. Gardner, Raymond, N. H.

DIRECTORS.

Frank D. Hutchins, George H. Colbath, Charles F. Gardner, Pittsfield, N. H.

HISTORY.

Incorporated March 17, 1903, under special law of the State of New Hampshire. Amended April 9, 1909.

LOCALITY SERVED.

Pittsfield, N. H.

BALANCE SHEET.

Assets.

Cost of plant.....	\$14,779.66
Cash	250.99
Items receivable	665.15
Materials and supplies.....	500.00
Total	\$16,195.80

Liabilities.

Capital stock	\$9,950.00
Bonds	3,900.00
Items payable	161.48
Profit	2,184.32
Total	\$16,195.80

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings.....	\$1,283.37
Other earnings	3,552.01
Total operating revenues.....	\$4,835.38
Operating expenses:	
Labor expense	\$1,253.94
Materials and other expense.....	2,082.46
Taxes	146.97
Total operating expenses.....	3,483.37
Net earnings	\$1,352.01

Interest	\$97.50	
Dividends	148.50	
Total deductions		\$246.00
Profit for year		\$1,106.01
Profit at beginning of year.....		1,122.82
Adjustments		44.51
Profit at close of year.....		\$2,184.32

CENTRAL STATION EQUIPMENT.

	No.	Total capacity.
Boilers	1	125 h. p.
Steam engines	1	90 h. p.
Alternating current generators.....	1	85 kw.

COMMERCIAL CONSUMERS.

Number of lighting consumers, metered 101, unmetered 7, total	108
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METERS AND TRANSFORMERS.

Total number of lighting meters	101
Total number of transformers	20
Total kilowatt capacity of transformers.....	38.4

LOAD DATA.

Connected street lighting load.....	4.5 kw.
“Peak load” as maximum instantaneous demand.....	32 kw.
Period during which service is furnished: Dusk to dawn.	
Schedule followed in street lighting: 15 minutes before sunset to 12 P. M. every night.	

PLAISTOW ELECTRIC LIGHT AND POWER COMPANY.

PLAISTOW, N. H.

PRINCIPAL OFFICERS.

President, E. A. Landman; Vice-President, A. W. Sawyer; Treasurer, J. W. Sleeper; Clerk, J. W. Peaslee, Plaistow, N. H.

DIRECTORS.

E. A. Landman, A. W. Sawyer, J. W. Peaslee, J. W. Sleeper, F. W. Woodman, C. E. Crockett, E. F. Carter, Plaistow, N. H.

LOCALITY SERVED.

Plaistow and Atkinson N. H.

GENERAL BALANCE SHEET.

Assets.

Cost of plant.....	\$6,879.50
Cash	781.63
Items receivable	267.83
Materials and supplies.....	148.77
Total	\$8,077.73

Liabilities.

Capital stock	\$4,450.00
Items payable	2,718.33
Profit	909.40
Total	<u>\$8,077.73</u>

INCOME ACCOUNT.

Operating revenues:		
Municipal street lighting.....	\$300.00	
Other earnings	1,523.27	
Total operating revenues.....		\$1,823.27
Operating expenses:		
Labor expense	\$125.00	
Materials and other expense.....	48.07	
Taxes	2.87	
Total operating expenses.....		<u>175.94</u>
Net earnings		\$1,647.33
Interest	\$72.00	
Other payments	976.50	
Total deductions		<u>1,048.50</u>
Profit for year		\$598.83
Profit at beginning of year.....		310.37
Profit at close of year.....		<u>\$909.40</u>

COMMERCIAL CONSUMERS.

Number of lighting consumers, metered, 68.

METERS AND TRANSFORMERS.

Total number of lighting meters	68
Total number of transformers	20
Total kilowatt capacity of transformers.....	34

STATISTICS OF POWER GENERATION.

Total kilowatt hours purchased for power.....	19,530
Purchased from Haverhill Electric Company, at 5c per kw. h.	

PLYMOUTH ELECTRIC LIGHT COMPANY.

PLYMOUTH, N. H.

PRINCIPAL OFFICERS.

President and General Manager, P. M. Ayer; Clerk, J. E. Smith; Treasurer, C. J. Ayer; Auditor, W. A. Kimball; Superintendent, J. M. Dustin, Plymouth, N. H.

DIRECTORS.

P. M. Ayer, C. J. Ayer, A. F. Wentworth, W. A. Kimball, P. S. Currier, Plymouth, N. H.

HISTORY.

Incorporated July 29, 1891, under the general laws of the State of New Hampshire.

LOCALITIES SERVED.

Plymouth and Holderness, N. H.

CAPITAL STOCK.

Common, authorized and outstanding:	
100 shares, par value \$100 per share, total.....	\$10,000.00
Dividends declared during year, none.	
Number of stockholders, 21; number in New Hampshire, 17.	
Par value of stock held in New Hampshire.....	8,500.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$247.38	
Accounts receivable	2,125.02	
		\$2,372.40
Materials and supplies.....		2,791.77
Fixed capital		18,718.84
Total		\$23,883.01

Liabilities.

Current liabilities:		
Taxes accrued	\$238.36	
Consumers' deposits	40.00	
		\$278.36
Reserve for depreciation.....		6,500.00
Capital stock—common		10,000.00
Surplus		7,104.65
Total		\$23,883.01

FIXED CAPITAL.

Land	\$725.00
Structures	3,250.00
Machinery and apparatus.....	6,070.00
Poles and fixtures.....	1,040.39
Distribution system—overhead	4,006.75
Electric services	294.64
Electric meters	2,575.13
Municipal street lighting system.....	384.93
General equipment	372.00
Total	\$18,718.84

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting	\$8,137.54	
Commercial power	199.29	
Municipal lighting	2,419.25	
Merchandise and jobbing revenue—electric (net)	925.21	
Total operating revenues.....		\$11,681.29
Operating expenses:		
Production	\$7,323.06	
Transmission and distribution }		
Insurance	101.50	
Miscellaneous	2,557.27	
Total operating expenses.....	\$9,981.83	
Taxes	238.36	
Uncollectible bills	129.10	
Total revenue deductions.....		10,349.29
Gross operating income.....		\$1,332.00

Non-operating revenues:

Rent from real estate.....	\$61.75	
Other non-operating revenues.....	75.00	
Net non-operating revenues.....		\$136.75
Gross income		\$1,468.75
Deductions from gross income.....		37.44
Net income		\$1,431.31
Surplus at beginning of year.....		5,673.34
Surplus at close of year.....		\$7,104.65

SERVICES RENDERED.

	Plymouth.	Holderness.
Number of consumers	163	6
Number of meters in service.....	181	6

MISCELLANEOUS STATISTICS.

Street lamps:

Incandescent multiple lamps: 40 watt, 96; 60 watt, 7; 100 watt, 2;
total, 105.

PORTSMOUTH.

(See Rockingham County Light & Power Company)

RAYMOND ELECTRIC COMPANY.

RAYMOND, N. H.

PRINCIPAL OFFICERS.

President, Francis B. Gardner, Boston, Mass.; Secretary, Lillian L. Gardner; Treasurer, Chas. F. Gardner, Raymond, N. H.

DIRECTORS.

Francis B. Gardner, Boston, Mass.; Lillian L. Gardner, Chas. F. Gardner, Raymond, N. H.

HISTORY.

Incorporated February 17, 1909, under special law of the State of New Hampshire.

LOCALITY SERVED.

Raymond, N. H.

BALANCE SHEET.

Assets.

Cost of plant.....	\$10,972.41
Cash	768.84
Items receivable	259.70
Materials and supplies.....	930.55
Total	\$12,931.50

Liabilities.

Capital stock	\$5,000.00
Notes	5,000.00
Items payable	890.43
Profit	2,041.07
Total	\$12,931.50

INCOME ACCOUNT.

Operating revenues:		
Municipal street lighting earnings.....	\$1,000.00	
Other earnings	3,191.86	
Total operating revenues.....		\$4,191.86
Operating expenses:		
Labor expense	\$1,570.64	
Materials and other expense	2,487.89	
Total operating expenses.....		4,058.53
Net earnings		\$133.55
Interest		112.50
Profit for year		\$21.05
Profit at beginning of year.....		2,009.15
Adjustments during year.....		10.87
Profit at close of year.....		\$2,041.07

CENTRAL STATION EQUIPMENT.

	No.	Total capacity.
Boilers	1	100 h. p.
Steam engines	1	100 h. p.
Alternating current generators.....	1	50 kw.

COMMERCIAL CONSUMERS.

Number of lighting consumers, metered 55, unmetered 7; total	62
Number of power consumers, metered 1, unmetered 1; total..	2

METERS AND TRANSFORMERS.

Total number of lighting meters.....	55
Total number of power meters.....	1
Total number of transformers.....	21
Total kilowatt capacity of transformers.....	56.5

LOAD DATA.

Connected power load	22 h. p.
Connected street lighting load.....	4 kw.
"Peak load" as maximum instantaneous demand.....	40.4 kw.
Period during which service is furnished: dusk to 12 P. M.	
Schedule followed in street lighting: moonlight schedule.	

ROCKINGHAM COUNTY LIGHT & POWER COMPANY.

PORTSMOUTH, N. H.

PRINCIPAL OFFICERS.

President, David A. Belden, Vice-President, Franklin Woodman, Haverhill, Mass.; Clerk and Superintendent, Frank A. Belden, Portsmouth, N. H.; Treasurer and Auditor, Frederick E. Webster, Haverhill, Mass.

DIRECTORS.

David A. Belden, Boston, Mass.; Alfred D. Foster, Milton, Mass.; Charles F. Ayer, Boston, Mass.; Franklin Woodman, Haverhill, Mass.; John S. Whitaker, Portsmouth, N. H.

HISTORY.

Incorporated October 30, 1900, under the general laws of the State of New Hampshire. Amended, April 13, 1901; July 22, 1901; October 3, 1904.

LOCALITIES SERVED.

Hampton, Newcastle, Newington, North Hampton, Portsmouth, and Rye, New Hampshire; Kittery and Eliot, Maine.

Lines also pass through the following cities and towns: Atkinson, Dover, East Kingston, Greenland, Hampton Falls, Kensington, Kingston, Madbury, Newton, Plaistow, Salem, Seabrook and South Hampton.

CAPITALIZATION.

Capital stock, authorized and outstanding:	
10,000 shares, par value.....	\$1,000,000.00
Dividends declared during year, none.	
Number of stockholders, 6; number in New Hampshire, 1.	
Par value of stock held in New Hampshire.....	100.00
Funded debt, authorized and outstanding:	
Mortgage bonds, 1902-1922, par value.....	600,000.00
Interest accrued and paid during year, 5%.....	30,000.00

BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$10,602.11	
Accounts receivable—electric	14,402.56	
Accounts receivable—sundry	9,178.97	
		\$34,183.64
Materials and supplies.....		28,257.43
Fixed capital		2,069,381.13
Construction work in progress		1,210.64
Prepayments		2,408.25
Total		\$2,133,441.09

Liabilities.

Current liabilities:		
Bills payable (promissory notes).....	\$329,500.00	
Consumers' deposits	145.00	
Accounts payable	23,375.96	
		\$353,020.96
Funded debt		600,000.00
Reserve for depreciation.....		144,638.61
Reserves		524.53
Capital stock		1,000,000.00
Surplus		35,256.99
Total		\$2,133,441.09

FIXED CAPITAL.

Organization	\$80,000.00
Royalties, franchises and licenses.....	10,100.00
Other intangible electric capital.....	496,283.18
Land	63,600.00
Structures	166,808.95
Machinery and apparatus	619,643.15
Poles and fixtures.....	162,068.11
Transmission conductors—overhead	219,459.80
Transmission conductors—underground cables.....	15,300.00
Distribution system—overhead	85,493.64
Electric services	17,595.41
Line transformers	25,150.35
Electric meters	23,290.60
Arc lamps and glower lamps.....	300.00
Municipal street lighting system.....	6,000.00
General equipment	10,787.89
Miscellaneous expenditures during construction.....	67,500.00
Total cost of fixed capital.....	\$2,069,381.13
Less reserve for depreciation.....	144,638.61
Total (net) value of fixed capital.....	\$1,924,742.52

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting		\$74,327.56
Commercial power		16,759.11
Municipal lighting		11,062.51
Merchandise and jobbing revenue (net).....		1,180.54
Other operating revenues (net) (railway power).....		181,507.42
Total operating revenues.....		<u>\$284,837.14</u>
Operating expenses:		
Production	\$154,711.18	
Transmission and distribution.....	34,604.97	
Insurance	1,217.43	
General depreciation	55,000.00	
Miscellaneous	17,256.85	
Total operating expenses.....	<u>\$262,790.43</u>	
Taxes	12,110.27	
Uncollectible bills	701.85	
Total revenue deductions		<u>\$275,602.55</u>
Gross operating income.....		\$9,234.59
Non-operating revenues		1,431.71
Gross income		<u>\$10,666.30</u>
Deductions from gross income:		
Interest on funded debt.....	\$30,000.00	
Interest on unfunded debt.....	14,643.17	
Total deductions from gross income.....		<u>44,643.17</u>
Net loss		\$33,976.87
Surplus at beginning of year.....		70,458.85
Total surplus		<u>\$36,481.98</u>
Net adjustments during year, Dr.....		1,224.99
Surplus at close of year.....		<u>\$35,256.99</u>

PRODUCTION AND SALES.

Kilowatt hours generated.....	15,726,420
Kilowatt hours delivered at switchboard.....	15,338,761
Kilowatt hours sold during year.....	12,816,050
Kilowatt hours used by respondent.....	197,565
Kilowatt hours unaccounted for.....	2,325,146
	Kw.
Maximum load, September 1, 1913.....	73,320
Minimum load, November 16, 1913.....	29,160

SERVICES RENDERED.

	Ports- mouth.	Rye.	No. Hampton.	New- castle.	Newing- ton.	Hamp- ton.	Street Rys.	Others.
Number of con- sumers	1,041	189	20	37	7	2	2	3
Number of meters in service.....	1,118	294	37	55	9	6	..	..
Current supplied:								
Private consum- ers	825,464	62,181	6,909	38,923	.....	.....	.....	.....
Municipal street lighting	193,393	2,458	9,000	23,385	.....	.....	.....	113,045
Other municipal service	46,681	.....	.....	.....	.....	.....	.....	.....
Other public service corpo- rations .....	.....	.....	.....	.....	1,088,938	10,356,450	.....	49,223
Used by re- spondent ...	197,565	.....	.....	.....	.....	.....	.....	.....
Total current supplied ..	1,263,103	64,639	15,909	62,308	1,088,938	10,356,450	.....	162,268

RUMNEY ELECTRIC COMPANY.

(Operated by W. H. Keniston & Son.)

RUMNEY, N. H.

LOCALITY SERVED.

Rumney, N. H.

BALANCE SHEET.

Assets.

Cost of plant.....	\$1,378.00
Items receivable	60.00
Materials and supplies.....	25.00
Total	<u>\$1,463.00</u>

Liabilities.

Investment	\$1,378.00
Profit	85.00
Total	<u>\$1,463.00</u>

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings.....	\$92.00
Other earnings	240.00
Total operating revenues.....	<u>\$332.00</u>
Operating expenses:	
Labor expense	\$17.40
Materials and other expense.....	25.00
Taxes	18.00
Total operating expenses.....	<u>60.40</u>
Net earnings	\$271.60
Other payments	\$271.60

CENTRAL OFFICE EQUIPMENT.

	No.	Total capacity.
Water wheels	1	60 h. p.
Alternating current generators.....	1	27 kw.

COMMERCIAL CONSUMERS.

Lighting.

	Unmetered.	Metered.
Residences	1	11
Churches .....	..	1

METERS AND TRANSFORMERS.

Total number of lighting meters	1
Total number of transformers	5

LOAD DATA.

Period during which service is furnished: from dark to 10.30 P. M. and occasionally in early morning to daylight.

SALEM ELECTRIC LIGHT COMPANY.

SALEM DEPOT, N. H.

PRINCIPAL OFFICERS.

Owner, F. P. Woodbury; Manager, E. R. Woodbury, Salem Depot, N. H.

LOCALITY SERVED.

Salem, N. H.

GENERAL BALANCE SHEET.

Assets.

Cost of plant.....	\$17,950.00
Items receivable	1,140.11
Materials and supplies.....	200.00
Total	<u>\$19,290.11</u>

Liabilities.

Investments	\$15,000.00
Items payable	116.80
Profit	4,173.31
Total	<u>\$19,290.11</u>

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings.....	\$1,978.72
Other earnings	3,515.42
Total	<u>\$5,494.14</u>

Operating expenses:	
Labor expense	\$1,866.94
Materials and other expense.....	2,995.87
Taxes	182.74
Total operating expenses.....	<u>5,045.55</u>
Profit for year.....	\$448.59

CENTRAL STATION EQUIPMENT.

	No.	Total capacity.
Boilers	1	200 h. p.
Steam engines	2	400 h. p.
Water wheels	1	60 h. p.
Direct current generators.....	2	11 kw.
Alternating current generators.....	2	160 kw.

COMMERCIAL CONSUMERS.

Number of lighting consumers, metered	70
Number of lighting consumers, unmetered	88

METERS AND TRANSFORMERS.

Total number of lighting meters	70
Total number of transformers	23
Total kilowatt capacity of transformers.....	79

LOAD DATA.

Connected lighting load.....	120 kw.
Connected street lighting load.....	12 kw.
"Peak load" as maximum instantaneous demand.....	23 kw.

SPAULDING AND FROST COMPANY.

FREMONT, N. H.

PRINCIPAL OFFICERS.

President, Leon C. Spaulding, North Rochester, N. H.; Vice-President, Huntley N. Spaulding, Boston, Mass.; Clerk, Treasurer, General Manager and Superintendent, S. A. Frost, Fremont, N. H.

DIRECTORS.

Leon C. Spaulding, North Rochester, N. H.; Huntley N. Spaulding, Boston, Mass.; Rolland H. Spaulding, North Rochester, N. H.; Marion Spaulding, Boston, Mass.; S. A. Frost, Fremont, N. H.

HISTORY.

Incorporated June 4, 1889, under the general laws of the State of New Hampshire.

NOTE—This is not the principal business of this operator. The utility is operated in connection with other business.

LOCALITY SERVED.

Fremont, N. H.

INCOME ACCOUNT.

Operating revenues:	
Commercial lighting	\$230.70
Operating expenses (estimated).....	230.70
	<hr/>
Net income .....	.....

SERVICES RENDERED.

Number of consumers	10
Number of meters in service .....	.....

Respondent used about 200 16 c. p. lights. Public used about 100 16 c. p. lights.

SUNAPEE ELECTRIC LIGHT & POWER COMPANY.

NEWPORT, N. H.

PRINCIPAL OFFICERS.

President and Treasurer, George E. Lewis, Newport, N. H.; Vice-President, F. L. Houghton, Brattleboro, Vt.; Secretary, W. W. Safford, Newport, N. H.

DIRECTORS.

George E. Lewis, Newport, N. H.; F. L. Houghton, W. H. Vinton, J. B. Manley, H. D. Walker, Brattleboro, Vt.

HISTORY.

Incorporated October 22, 1896, under the general laws of the State of New Hampshire.

LOCALITY SERVED.

Sunapee and a part of Newport.

BALANCE SHEET.

Assets.

Cost of plant.....	\$23,601.43
Cash	13,323.89
Items receivable	652.82
Total	<u>\$37,578.14</u>

Liabilities.

Capital stock	\$20,000.00
Items payable	11,870.98
Profit	5,707.16
Total	<u>\$37,578.14</u>

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings.....	\$750.63
Other earnings	5,741.57
Total operating revenues.....	<u>\$6,492.20</u>
Operating expenses:	
Labor expense	\$353.54
Materials and other expense.....	3,681.33
Taxes	92.17
Total operating expenses.....	<u>4,127.04</u>
Net earnings	<u>\$2,365.16</u>
Interest	\$72.52
Dividends	468.67
Other payments	1,035.58
Total deductions	<u>1,576.77</u>
Profit for year.....	<u>\$788.39</u>
Profit at beginning of year.....	<u>4,918.77</u>
Profit at close of year.....	<u>\$5,707.16</u>

COMMERCIAL CONSUMERS.

Number of lighting consumers, metered.....	199
Number of power consumers, metered.....	9

METERS AND TRANSFORMERS.

Total number of lighting meters	199
Total number of power meters	9
Total number of transformers	38
Total kilowatt capacity of transformers.....	306

LOAD DATA.

Connected lighting load	500 kw.
Connected power load	125 kw.
Connected street lighting load	4 kw.
"Peak load" as maximum instantaneous demand.....	65 kw. (estimate)
Service is continuous throughout the day of 24 hours.	
Schedule followed in street lighting: dusk to midnight.	

STATISTICS OF POWER GENERATION.

Total kw. h. purchased.....	153,966
Purchased from Newport Electric Light Co.	

TILTON ELECTRIC LIGHT & POWER COMPANY.

TILTON, N. H.

PRINCIPAL OFFICERS.

President and Treasurer, William H. Moses; Clerk, Arthur S. Brown,
Tilton, N. H.

HISTORY.

Incorporated May 26, 1910, under the general laws of the State of New
Hampshire.

LOCALITY SERVED.

Tilton, Northfield and Belmont.

CAPITALIZATION.

Capital stock, authorized and outstanding:	
Common, 1,700 shares, par value.....	\$170,000.00
Dividends declared during year, none.	
Number of stockholders, 5; all in New Hampshire.	
Par value of stock held in New Hampshire.....	170,000.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$4,406.31	
Accounts receivable	2,208.31	
		\$6,614.62
Fixed capital		178,657.05
Total		\$185,271.67

Liabilities.

Current liabilities:	
Bills payable (promissory notes).....	\$6,000.00
Capital stock—common	170,000.00
Surplus	9,271.67
Total	\$185,271.67

FIXED CAPITAL.

Intangible electric capital (water power).....	\$100,000.00
Land	5,000.00
Structures	16,335.86
Machinery and apparatus.....	33,131.89
Poles and fixtures.....	4,237.87
Transmission conductors—overhead	8,587.23
Distribution system—overhead	1,059.10
Electric services	142.80
Line transformers	3,123.50
Electric meters	2,979.17
Arc lamps and glower lamps.....	1,000.00
Municipal street lighting system.....	3,059.63
Total cost of fixed capital.....	\$178,657.05

INCOME ACCOUNT.

Operating revenues:	
Commercial lighting }	\$14,811.65
Commercial power }	
Municipal lighting	3,193.97
Total operating revenues.....	\$18,005.62

Operating expenses:		
Production	\$1,831.05	
Transmission and distribution.....	609.41	
Insurance	510.70	
Miscellaneous	2,033.61	
Total operating expenses.....	\$4,984.77	
Taxes	1,547.53	
Total revenue deductions.....		\$6,532.30
Gross operating income.....		\$11,473.32
Non-operating revenues		81.98
Net income		\$11,555.30
Surplus at beginning of year.....		12,166.37
Total		\$23,721.67
Dividends on common stock, 8½%.....		14,450.00
Surplus at close of year.....		\$9,271.67

SERVICES RENDERED.

Tilton and Northfield.

Number of consumers	258
Number of meters in service.....	249

TWIN STATE GAS & ELECTRIC COMPANY.
BERLIN DIVISION.*

(Three months ending June 30, 1914.)

LOCATION OF OFFICES.

Office of President: Dover, N. H.

Office of Division Superintendent: Berlin, N. H.

PRINCIPAL OFFICERS AND DIRECTORS.

See Report of Main Office.

LOCALITIES SERVED.

Berlin, Gorham and Milan, N. H.

FIXED CAPITAL.

Electric.

Dams, canals and pipe lines.....	\$17,322.33
Transmission conductors—overhead	324.02
Transmission conductors—underground	315,000.00
Distribution system—overhead	291.73
Electric services	136.30
Electric meters	631.19
General equipment	111.43
Total	\$333,817.00

INCOME ACCOUNT.

Operating revenues:

Electric—

Commercial lighting	\$10,321.44
Commercial power	3,492.38
Municipal lighting	1,599.27
Merchandise and jobbing.....	1,157.61
Ornamental street lighting.....	276.99

Total operating revenues.....	\$16,847.69
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Operating expenses:

Electric—		
Production	\$2,649.46	
Transmission, distribution and utilization	1,166.52	
Insurance	351.17	
Miscellaneous	1,261.06	
Total operating expenses.....	\$5,428.21	
Taxes	265.65	
Total revenue deductions.....		\$5,693.86
Gross income for three months.....		\$11,153.83

TWIN STATE GAS & ELECTRIC COMPANY.

BRATTLEBORO DIVISION.*

LOCATION OF OFFICES.

Office of President: Dover, N. H.

Office of Division Superintendent: Brattleboro, Vt.

PRINCIPAL OFFICERS.

(See Report of Home Office.)

DIRECTORS.

(See Report of Main Office.)

LOCALITIES SERVED.

Brattleboro, Vt., and Hinsdale, N. H.

FIXED CAPITAL.

Gas.

Organization	\$29,762.42
Land	9,846.00
Structures	29,524.80
Machinery and apparatus.....	24,604.50
Trunk lines and mains.....	76,348.73
Gas services	8,778.94
Gas meters	14,946.37
General equipment	8,545.06
Total cost of fixed capital—gas.....	\$202,356.82

Electric.

Organization	\$7,527.39
Royalties, franchises and licenses.....	20,000.00
Structures }	249,434.50
Land }	
Machinery and apparatus.....	44,632.12
Electric services	82,320.16
Line transformers }	25,596.63
Electric meters }	
Arc light installation.....	17,711.38
Miscellaneous expenditures during construction.....	22,078.36
Total cost of fixed capital—electric.....	\$469,300.54

*For corporate balance sheet, see report of the utility as a whole (Main Office). An apportioned statement of resources and liabilities for each division is now in course of preparation by the company and will be reported with the report for the year ending June 30, 1915.

INCOME ACCOUNT.

Operating revenues:

Gas—		
Commercial lighting	\$26,896.66	
Merchandise and jobbing.....	637.59	
Total—gas		\$27,534.25
Electric—		
Commercial lighting	\$32,300.72	
Commercial power	9,466.84	
Municipal lighting	11,163.35	
Merchandise and jobbing.....	2,260.53	
Total—electric		55,191.44
Total operating revenue—gas and electric.....		\$108,287.36

Operating expenses:

Gas—		
Production	\$14,156.46	
Transmission and distribution.....	1,643.29	
Insurance	498.07	
Miscellaneous	4,943.43	
Total—gas	\$21,241.25	
Electric—		
Production	\$11,332.25	
Transmission and distribu- tion	6,038.43	
Insurance	1,445.94	
Miscellaneous	8,343.19	
Utilization	717.86	
Total—electric	\$27,877.67	
Taxes	3,061.46	
Railroad expenses	25,054.46	
Total revenue deductions.....		77,234.84
Gross operating income.....		\$31,052.52
Non-operating revenues		725.00
Gross income		\$31,777.52

METER AND SERVICE DATA.

Size of Meter.	Number in use at beginning of year.	Added during year.	Removed during year.	Number in use at close of year.
3-light	1,033	120	78	1,075
5-light	110	138	35	213
10-light	27	5	5	27
20-light	16	1	...	17
30-light	3	...	...	3
45-light	1	...	...	1
150-light	1	...	...	1
Total	1,191	264	118	1,337

Street Mains in Use June 30, 1914.

	Cast iron, feet.	Wrought iron, feet.	Steel, feet.
2-inch	1,187	....	3,843
3-inch	8,054	2,750	....
4-inch	6,375	3,368	....
6-inch	15,705	....	....

Number of service pipes in use.....	927
Consumers	1,329

Gas Made and Sold During the Year.

Number of feet on hand at beginning of year.....	9,000
Number of feet of gas made during the year:	
Water gas	20,689,500
Total gas made and on hand.....	20,698,500
Number of feet of gas sold by meter during the year	17,309,300
Number of feet of gas used at works and offices during the year.....	68,500
Number of feet of gas on hand at close of year	25,000
Total gas sold, used and on hand.....	17,402,800
Number of feet unaccounted for during the year.....	3,295,700

PRODUCTION AND SALES.

Electric.

Kilowatt hours generated	548,050
Kilowatt hours purchased	1,275,646
Kilowatt hours delivered at switchboard.....	1,823,696
Kilowatt hours sold during year.....	1,537,425
Kilowatt hours used by respondent.....	29,331
Kilowatt hours unaccounted for	256,940
Per cent unaccounted for.....	14
Maximum load, November 29, 1913.....	535 kw.
Minimum load, July 13, 1913.....	40 kw.

SERVICES RENDERED.

	Brattleboro.	Hinsdale.
Number of consumers	1,030	140
Number of meters in service.....	1,070	140
Connected load	1,804	.....
Current supplied:		
Private consumers, kw. h.....	823,920	.....
Municipal street lighting, kw. h.....	200,325	24,123
Other municipal service, kw. h.....	14,944	.....
Other public service corporations, kw. h.	123,680	.....
Used by respondent, kw. h.....	29,331	.....
Street railroad	356,998	.....
Total current supplied, kw. h.....	1,543,198	24,123

*For corporate balance sheet, see report of the utility as a whole (Main Office). An apportioned statement of resources and liabilities for each division is now in course of preparation by the company and will be reported with the report for the year ending June 30, 1915.

TWIN STATE GAS & ELECTRIC COMPANY.

DOVER DIVISION.*

LOCATION OF OFFICES.

Office of President: Dover, N. H.

Office of Division Superintendent: Dover, N. H.

PRINCIPAL OFFICERS AND DIRECTORS.

(See Report of Main Office.)

LOCALITIES SERVED.

Dover, Rochester, Rollinsford and Somersworth, E. Rochester, Gonic, Salmon Falls, New Hampshire; Berwick, N. Berwick and S. Berwick, Maine.

FIXED CAPITAL.

Gas.

Organization	\$11,310.70
Royalties, franchises and licenses.....	20,011.35
Land	33,443.84
Structures	52,953.67
Machinery and apparatus.....	91,227.47
Trunk lines and mains.....	215,408.88
Gas services	34,938.44
Gas meters	22,161.79
General equipment	9,551.97
Miscellaneous expenditures during construction.....	34,537.89
Total cost of fixed capital—gas.....	\$525,546.00

Electric.

Organization	\$35,164.60
Royalties, franchises and licenses.....	50,000.00
Land	26,540.66
Structures	127,894.36
Machinery and apparatus.....	198,214.88
Poles and fixtures.....	65,721.68
Transmission conductors—overhead	332,248.71
Distribution system—overhead	226,630.57
Electric services, line transformers, and meters.....	112,398.84
Arc lamps and glow lamps.....	29,366.72
Municipal street lighting system.....	117,780.95
General equipment	41,018.81
Miscellaneous expenditures during construction.....	53,692.82
Ornamental lighting	613.67
Total cost of fixed capital—electric.....	\$1,417,282.27

INCOME ACCOUNT.

Operating revenues:

Gas—

Commercial lighting	\$33,400.22
Merchandise and jobbing revenue (net).....	631.27

Total—gas

\$34,031.49

Electric—

Commercial lighting	\$66,693.49
Commercial power	46,177.45
Municipal lighting	29,090.17
Merchandise and jobbing revenue (net).....	946.86

Total—electric

142,907.97

Total operating revenues.....

\$176,939.46

*For corporate balance sheet, see report of the utility as a whole (Main Office). An apportioned statement of resources and liabilities for each division is now in course of preparation by the company and will be reported with the report for the year ending June 30, 1915.

Operating expenses:

Gas—

Production	\$16,576.50
Transmission and distribution.....	3,065.52
Insurance	890.35
Miscellaneous	5,261.31

Total—gas \$25,793.68

Electric—

Production	\$47,358.87
Transmission and distribution.....	9,438.60
Insurance	3,298.95
Miscellaneous	20,540.61
Utilization	3,718.38

Total—electric \$84,355.41

Taxes 9,274.99

Uncollectible bills 484.44

Total revenue deductions..... \$119,908.52

Gross operating income..... \$57,030.94

Non-operating revenues 696.72

Gross income \$57,727.66

METER AND SERVICE DATA.

Gas.

Number of meters at close of year (mostly 3 and 5 lights)....	1,698
Number of service pipes in use.....	1,698
Number of consumers	1,698

Gas Made and Sold During the Year.

Number of feet on hand at beginning of year..... 23,000

Number of feet of gas made during the year:

Water gas 25,958,500

Total gas made and on hand..... 25,980,500

Number of feet of gas sold by meter during
the year 23,347,600

Number of feet of gas used at works and of-
fices during the year..... 711,800

Number of feet of gas on hand at close of year 22,000

Total gas sold, used and on hand..... 24,081,400

Number of feet unaccounted for during the year..... 1,899,100

Electric.

Kilowatt hours generated	3,049,342
Kilowatt hours purchased.....	1,338,366
Kilowatt hours delivered at switchboard.....	4,387,708
Kilowatt hours sold during year.....	3,661,935
Kilowatt hours used by respondent.....	31,351
Kilowatt hours unaccounted for.....	694,422
Per cent unaccounted for.....	158
Maximum load, June 30, 11,000 kw.	
Minimum load, March 2, 3,780 kw.	

SERVICES RENDERED IN NEW HAMPSHIRE.

	Dover.	Rochester.	Somers- worth.
Number of consumers.....	918	673	540
Number of meters in service.....	865	667	540

Current supplied:			
Private consumers, kw. h.	542,329	169,386	245,800
Municipal street lighting, kw. h.	263,350	117,715	165,437
Other municipal service, kw. h.	319,797	7,784	4,517
Other public service corporations, kw. h.	1,349,600	.....	.....
Used by respondent, kw. h.	24,736	4,646	1,043
Total current supplied, kw. h.	2,499,812	299,531	416,797

TWIN STATE GAS & ELECTRIC COMPANY.

MAIN OFFICE.

LOCATION OF OFFICES.

Office of President: Dover, N. H.

PRINCIPAL OFFICERS.

President and General Manager, I. L. Meloon, Dover, N. H.; Vice-President, Edgar Lanfare, New York, N. Y.; Secretary, A. D. Foster, Dover, N. H.; Treasurer, W. G. Meloon, Berlin, N. H.; Asst. Secretary and Asst. Treasurer, J. F. Reilly, New York, N. Y.; Superintendents, W. G. Meloon, Berlin, N. H., E. M. Addis, Brattleboro, Vt., E. E. Larrabee, Bennington, Vt.

LOCALITIES SERVED.

Dover, Rochester, Somersworth, Salmon Falls, Hinsdale, Gorham, Milan and Berlin, N. H.; Berwick, N. Berwick, and S. Berwick, Me.; Brattleboro, Barrington and St. Johnsbury, Vt., and Hoosick Falls, N. Y.

DIRECTORS.

A. H. Bickmore, New York, N. Y.; I. L. Meloon, Dover, N. H.; S. Insull, M. J. Insull, Chicago, Ill.; Edgar Lanfare, New York, N. Y.

BALANCE SHEET.

		<i>Assets.</i>	
Cash and current assets:			
Cash	\$8,561.13		
Bills receivable	2,622.37		
Accounts receivable—gas }	87,761.36		
Accounts receivable—electric }			
Accounts receivable—sundry	14,918.40		
Interest and dividends receivable	462.54		
Earnings receivable	6,010.48		
			\$120,336.28
Materials and supplies			61,290.06
Investments			1,000.00
Sinking funds			7,181.24
Fixed capital			5,683,606.68
Construction work in progress			162,231.03
Prepayments			513.71
Unextinguished discount on securities			73,688.24
Suspense			4,215.21
Reacquired securities			7,000.00
Collateral securities			685,400.00
Expenditures, job work			1,197.55
Amortization accrued			1,815.67
Total			\$6,809,475.67

Liabilities.

Current liabilities:

Taxes accrued	\$18,640.87	
Interest accrued on funded debt.....	40,261.04	
Interest accrued on unfunded debt.....	374.61	
Bills payable	88,348.71	
Consumers' deposits	900.43	
Accounts payable	63,606.41	
		<hr/>
		\$212,132.07
Amortization general		1,815.67
Unamortized premium on debt.....		698.52
Debentures		300,500.00
Capital stock—preferred		1,500,000.00
Capital stock—common		1,250,000.00
Bonds		2,775,500.00
Collateral gold notes.....		649,100.00
Surplus		119,729.41
		<hr/>
Total		\$6,809,475.67

SINKING FUNDS AND SPECIAL DEPOSITS.

Union Safe Deposit & Trust Co.....	\$3,770.09
To retire \$49,000.00 of Cascade Light & Power Company's bonds.	
American Trust Co.....	3,411.15
To retire \$22,000.00 of Cascade Light & Power Company's bonds.	
	<hr/>
Total sinking funds.....	\$7,181.24

INVESTMENTS.

Dover Realty Co., par value.....	\$1,000.00
10 shares, par value \$100 each. Dated December 9, 1912.	

CAPITAL STOCK.

	No. of shares authorized.	Par value of one share.	Total par value authorized.	Total par value outstanding.	Dividends de- clared during year.	
					Rate	Amount
Common...	25,000	\$100	\$2,500,000	\$1,250,000	4%	\$12,500.00*
Preferred ..	25,000	100	2,500,000	1,500,000	5%	59,375.00
						<hr/>
Total..	50,000		\$5,000,000	\$2,750,000		\$71,875.00

*Dividend on common stock paid from July 1st to September 30th, 1913, only.

Description of Bond.	Term.		FUNDED DEBT.		Interest paid during year.	
	Date of issue.	Date of maturity.	Total par value authorized.	Total par value outstanding.	Rate.	Amount.
Dover Gas Light Co.....	1905	1925	\$250,000.00	\$135,000.00	5%	\$6,750.00
United Gas & Electric Co....	1897	1917	250,000.00	250,000.00	5%	12,500.00
Bennington Water Power & Light Co.	1893	1923	100,000.00	64,000.00	5%	3,200.00
Bennington Water Power & Light Co.	1899	1919	30,000.00	12,500.00	5%	625.00
Hoosick Falls Electric Co....	1900	1930	75,000.00	65,000.00	5%	3,250.00
Hoosick Falls Illuminating Co.	1905	1925	150,000.00	75,500.00	5%	3,775.00
Brattleboro Gas Light Co....	1903	1923	80,000.00	69,000.00	5%	3,450.00
Bennington Electric Co.....	1905	1925	175,000.00	98,500.00	4½%	4,432.50
St. Johnsbury Electric Co....	1909	....	80,000.00	80,000.00	5%	4,000.00
Cascade Electric Light & Power Co.	1901	1921	40,000.00	22,000.00	5%	1,100.00
Cascade Light & Power Co..	1905	1925	100,000.00	49,000.00	5%	2,450.00
Twin State First & Refunding bonds.....	1906	1926	1,500,000.00	1,040,000.00	4½%	46,282.50
Twin State First & Refunding bonds.....	1913	1953	10,000,000.00	815,000.00	5%	737.47
Collateral notes	1913	1916	1,000,000.00	649,100.00	6%	28,084.50
Debentures	1913	1918	325,000.00	300,500.00	5%	8,256.25
Total			\$13,935,000.00	\$3,725,100.00		\$128,893.22

INCOME ACCOUNT.

Operating revenues:		
Dover Division	\$177,636.18	
Brattleboro	109,012.36	
Bennington	64,883.95	
Hoosick Falls	43,576.82	
St. Johnsbury	93,428.62	
Berlin	16,847.69	
		\$505,385.62
Operating expenses:		
Dover Division	\$120,639.51	
Brattleboro	73,530.52	
Bennington	41,552.10	
Hoosick Falls	23,328.86	
St. Johnsbury	41,181.18	
Berlin	5,711.88	
		305,944.05
Gross income		\$199,441.57
Profit and loss, Cascade Co.....		9,113.04
Total gross income.....		\$208,554.61
Deductions:		
Interest on funded debt		128,893.22
Net income		\$79,661.39
Surplus June 30, 1913.....		111,943.02
		\$191,604.41
Dividends:		
Common stock	\$12,500.00	
Preferred stock	59,375.00	
		71,875.00
Surplus June 30, 1914.....		\$119,729.41

ROBERT A. WARE.

WILTON, N. H.

Robert A. Ware was given authority to operate an electric utility in the village of West Wilton on January 29, 1914, but no service was given during the fiscal period ending June 30, 1914.

WARREN WATER & LIGHT COMPANY.

WARREN, N. H.

PRINCIPAL OFFICERS.

President, Archie A. Head; Treasurer, Edgar S. Carbee, Warren, N. H.

DIRECTORS.

Edgar S. Carbee, A. M. Carbee, A. A. Head, M. L. Head, Warren, N. H.

BALANCE SHEET.

Assets.

Cost of plant.....	\$9,301.89
Items receivable	3,222.08
Materials and supplies.....	22.33
Total	<u>\$12,546.30</u>

Liabilities.

Capital stock	\$7,700.00
Bonds	1,500.00
Items payable	999.17
Profit	2,347.13
Total	<u>\$12,546.30</u>

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings.....	\$283.32
Other earnings	872.60
Total operating revenues.....	<u>\$1,155.92</u>
Operating expenses:	
Labor expense	\$912.50
Materials and other expense.....	27.17
Taxes	35.32
Total operating expenses.....	<u>974.99</u>
Net earnings	<u>\$180.93</u>
Interest	87.00
Other payments	257.82
Total deductions	<u>344.82</u>
	<u>\$163.89</u>

CENTRAL STATION EQUIPMENT.

Water wheels, 1.....	30 h. p.
Alternating current generators, 1.....	50 kw.

COMMERCIAL CONSUMERS.

Lighting consumers	41
Power consumers	3

METERS AND TRANSFORMERS.

Total number of lighting consumers	23
Total number of transformers	8
Total kilowatt capacity of transformers.....	125

LOAD DATA.

Connected lighting load	22,175 kw.
Connected power load	3,500 kw.
Connected street lighting load.....	1,960 kw.
"Peak load" as maximum instantaneous demand.....	12,650 kw.
24-hour service is given except in low water periods, when service is given until eleven o'clock.	
Schedule followed in street lighting: moonlight; eleven o'clock.	

WENTWORTH HALL ELECTRIC LIGHT CO.

(M. C. Wentworth, Owner.)

JACKSON, N. H.

LOCALITY SERVED.

Jackson.

NOTE—Furnishing electricity is not the principal business of this operator. The utility is operated in connection with other business.

The plant was built in about 1895 for the purpose of generating current for use in the hotel known as Wentworth Hall and Cottages. The entire cost of the electric plant including machinery and 24" steel tube line, was about \$13,000.00.

Besides the hotel, current is furnished to only one private consumer. For this service the company gets \$75 per year.

CENTRAL STATION EQUIPMENT.

	No.	Total capacity.
Water wheels	1	40 h. p.
Direct current generators.....	2	64 kw.

Current is furnished for street lights, for which no charge is made.

WHITEFIELD ELECTRIC LIGHT CO.

WHITEFIELD, N. H.

LOCATION OF OFFICE.

Berlin, N. H.

PRINCIPAL OFFICERS.

President, Lillian B. Eastman; Vice-President, W. H. Gerrish; Treasurer, M. H. Taylor, Berlin, N. H.

DIRECTORS.

(Mrs.) Lillian B. Eastman, W. H. Gerrish, M. H. Taylor, Berlin, N. H.

HISTORY.

Incorporated March 23, 1897, under special law of the State of New Hampshire.

LOCALITY SERVED.

Whitefield, N. H.

BALANCE SHEET.

Assets.

Cost of plant.....	\$12,500.00
Cash	411.54
Items receivable	721.92
Loss	13,166.54
Total	\$26,800.00

Liabilities.

Capital stock	\$20,000.00
Items payable	6,800.00
Total	\$26,800.00

INCOME ACCOUNT.

Operating revenues:		
Municipal street lighting.....	\$1,035.00	
Other earnings	3,961.89	
Total operating revenues.....		\$4,996.89
Operating expenses:		
Labor expense	\$1,970.55	
Materials and other expense.....	2,664.20	
Taxes	130.64	
Total operating expenses.....		4,765.39
Net earnings		\$231.50
Interest		408.00
Loss for year.....		\$176.50
Loss at beginning of year.....		12,990.04
Loss at close of year.....		\$13,166.54

COMMERCIAL CONSUMERS.

Consumers, lighting, metered 154, unmetered 6, power 3, total	163
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METERS AND TRANSFORMERS.

Total number of lighting meters	154
Total number of power meters	3
Total number of transformers	17
Total kilowatt capacity of transformers.....	75

LOAD DATA.

Connected lighting load	60 kw.
Connected power load	15 kw.
Connected street lighting load	4 kw.
'Peak load' as maximum instantaneous demand.....	60 kw.
Service is continuous throughout the day of 24 hours.	
Schedule followed in street lighting: all night.	

STATISTICS OF POWER GENERATION.

Power is purchased from Bethlehem Electric Light Co. at \$1,500 per year.

WINDSOR ELECTRIC LIGHT COMPANY.

WINDSOR, VT.

PRINCIPAL OFFICERS.

President and Treasurer, Frank A. Kennedy; Secretary, Gilbert A. Davis; Superintendent, Richard P. Osgood; General Manager, Edward Anderson, Windsor, Vt.

DIRECTORS.

Frank A. Kennedy, Windsor, Vt.; F. Lowell Kennedy, Cambridge, Mass.; Edward Anderson, Windsor, Vt.

HISTORY.

Incorporated February 21, 1890, under laws of Vermont, and began business soon after.

LOCALITIES SERVED.

Windsor and Hartland, Vt., and parts of Cornish, N. H.

BALANCE SHEET.

Assets.

Cost of plant.....	\$42,948.12
Materials and supplies.....	1,733.88
Total	\$44,682.00

Liabilities.

Capital stock	\$5,000.00
Items payable	37,948.12
Profit	1,733.88
Total	\$44,682.00

INCOME ACCOUNT.

Operating revenues:	
Municipal street lighting earnings.....	\$1,313.92
Other earnings	14,125.86
Total operating revenues.....	\$15,439.78

Operating expenses:		
Labor expense	\$7,237.95	
Materials and other expense.....	3,225.31	
Taxes (including employees liability in)...	327.50	
Total operating expenses.....		\$10,790.76
Net earnings		4,649.02
Interest	1,724.55	
Other payments, depreciation 5%.....	2,155.68	
Total deductions		3,880.23
Profit for year.....		\$768.79

CENTRAL STATION EQUIPMENT.

	No.	Total capacity.
Boilers	2	300 h p.
Steam engines (one 200 h. p. and one 90 h. p.)	2	290 h. p.
Water wheels	2	50 and 200 h. p.
Alternating current generators.....	4	475 kw.

NOTE—This company as of June 30, 1914, furnished light in New Hampshire for only seven residences, with a gross revenue of \$448.60.

WONALANCET ELECTRIC COMPANY.

WONALANCET, N. H.

HISTORY.

This company is a partnership formed in 1910 by Arthur T. Walden and J. P. Lombard of Wonalancet, N. H. Each has a half interest. The principal business is that of a sawmill, and the property and accounts are not kept separate.

LOCALITY SERVED.

Part of Tamworth and Albany.

BALANCE SHEET.

Assets.

Cost of plant.....	\$5,252.07
Cash	45.20
Loss	1,369.39
Total	\$6,666.66

Liabilities.

Investment	\$6,666.66
Total	\$6,666.66

INCOME ACCOUNT.

Operating revenues:		
Earnings from operation.....		\$127.30
Operating expenses:		
Materials and other expense.....	\$605.99	
Taxes	30.00	
Total operating expenses.....		763.29
Net loss		\$635.99

COMMERCIAL CONSUMERS.

Lighting	3
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METERS AND TRANSFORMERS.

Total number of lighting meters	3
Total number of power meters	2
Total number of transformers	4

CENTRAL STATION EQUIPMENT.

Water wheels, 1 12-inch Rodney Hunt horizontal turbine.
Alternating current generators, 1 Fort Wayne, 37½ kw. capacity.

FRANK P. WOODBURY.

(See Salem Electric Light Company.)

ELECTRIC UTIL

	Capital stock outstanding.	Funded debt outstanding.	Fixed capital— all departments.
Allen, The Wm. F. Co.....	\$30,000.00	\$47,817.34	\$60,323.81
Alton Electric Light & Power Co.....	10,000.00	.....	9,800.00*
American Woolen Co.**.....	6,495.96(c)	.....	6,007.95*
Ashland Electric Light Co.....	15,000.00	650.00	16,630.27*
Ashuelot Gas & Electric Co.....	140,000.00	140,000.00	305,383.38
Baldwin, Frank W.....	3,233.04(c)	.....	3,000.00*
Berlin Electric Light Co.†.....	50,000.00	.....	53,957.59
Berlin-Shelburne Power Co.....	50,000.00	.....	279,833.62
Berwick & Salmon Falls Electric Co...	9,800.00	37,000.00	53,122.56
Bethlehem Elec. Light Co.....	50,000.00	9,000.00	77,000.00*
Bradford (Vt.) Electric Lighting Co...	50,000.00	25,000.00	96,148.19
Bradford Light & Power Co.....	10,000.00(c)	.....	10,000.00*
Bristol Electric Light Co.....	16,000.00	.....	44,999.36*
Campton Electric Light Co.**.....	3,000.00*	.....	3,000.00*
Center Harbor Electric Co.**.....	2,350.00(c)	.....	2,350.00*
Central N. H. Power Co.(a).....	.....	.....	.....
Chocorua Electric Light Plant (a)....	.....	.....	.....
Claremont Power Co.....	700,000.00	485,000.00	934,197.23
Cloutman Gas & Electric Co.....	15,000.00	.....	25,713.00
Concord Electric Co.....	675,000.00	335,000.00	1,080,512.73
Connecticut River Power Co. of N. H..	2,000,000.00	1,958,000.00	4,417,895.40
Contoocook Electric Light Co.....	24,000.00	.....	23,494.75*
Craig, Rockwell F.**.....	1,500.00(c)	.....	1,500.00*
Derry Electric Co.....	50,000.00	50,000.00	106,907.95
Exeter & Hampton Electric Co.....	125,000.00	.....	141,851.36
Fall Mountain Electric Co.....	125,000.00	65,000.00	283,944.27
Fessenden, Orville D.....	5,878.40(c)	.....	5,878.40*
Fox & Putnam.....	1,767.17(c)	.....	1,767.17*
Franklin Light & Power Co.....	150,000.00	.....	182,753.26
Goodell Company.....	60,000.00	30,000.00	104,531.53
Goodrich Falls Electric Co.....	36,000.00	.....	36,000.00*
Greenville Electric Lighting Co.....	2,000.00	.....	3,593.34*
Groveton Electric Light Co.....	10,000.00	.....	19,139.75*
Henry, J. E. & Sons Co.**.....	38,400.00	.....	172,800.00*
Hill Light & Power Co.**.....	5,244.38(c)	.....	5,244.38*
Hillsboro Electric Light & Power Co.	35,000.00	.....	72,208.61
Jaffrey & Troy Elec. Light Co.....	25,000.00	8,500.00	38,055.43*
Jones & Linscott Electric Co.....	40,000.00	17,000.00	53,570.84*
Keene Gas & Electric Co. (b).....	300,000.00	190,000.00	522,910.40
Laconia Gas & Electric Co. (b).....	480,000.00	350,000.00	829,759.17
Lancaster & Jefferson Electric Co....	40,000.00	40,000.00	85,590.49*
Lebanon Electric Light & Power Co...	18,000.00	.....	51,692.98
Lisbon Light & Power Co.....	45,000.00	.....	66,206.43
Loudon Electric Co.....	3,000.00*	.....	3,000.00*
Lyman Falls Power Co.....	63,000.00	4,000.00	193,913.63
Manchester Traction, Light & Power Co.	2,800,000.00	2,000,000.00	2,979,273.79
Marlborough Electric Light, Heat & Power Co.	14,700.00	.....	16,559.20*
Mascoma Electric Light & Gas Co.....	49,600.00	.....	150,350.65
McIndoe Falls Light & Power Co.....	2,600.00	.....	2,600.00*
Meredith Electric Light Co.....	16,000.00	5,000.00	13,415.91*
Meriden Electric Light & Power Co....	3,900.00	.....	4,093.64*
Milford Light & Power Co.....	215,000.00	148,500.00	366,823.79
Nashua Light, Heat & Power Co.....	600,000.00	.....	863,225.63
N. H. Water & Electric Power Co. of N. H.	32,600.00	.....	64,111.42*
New Hampton Electric Light & Power Co.	4,000.00	.....	4,000.00*
Newmarket Electric Co.....	101,000.00	.....	100,000.00
Newmarket Electric Light, Heat & Power Co.	22,000.00	16,000.00	38,289.76*
Newport Electric Light Co.....	70,000.00	.....	90,620.74
Penacook Electric Light Co.....	40,000.00	.....	50,462.23
Pittsfield Light & Power Co.....	9,950.00	3,900.00	14,779.66*

ITY STATISTICS.

Cash and current assets excluding materials and supplies.	Current liabilities.	Total operating revenues.	Total operating expenses.	Operating ratio.	Dividends declared. %
\$10,291.93	\$16,883.15	\$9,874.37	\$11,498.10	116	....
657.00	264.00	4,998.07	3,017.65	60	....
256.09	.....	3,006.45	3,290.84	109	....
646.38	20.83	4,909.60	2,901.92	59	6
10,821.36	40,033.17	.....	.....	...	(e)
.....	.....	400.10	598.14	149	....
56,537.10	469.21	27,224.58	22,875.05	84	....
11,926.38	232,817.01	33,002.80	19,475.12	62	....
4,890.04	7,327.47	12,627.76	7,954.92	62	....
27.18	13,000.00	12,509.44	10,505.40	83	....
208.68	12,000.00	12,352.97	8,696.50	70	6
1,343.00	.....	1,494.00	151.00	...	....
3,963.40	9,269.37	9,030.60	5,615.32	62	....
.....	.....	683.14	584.50	85	....
547.00	.....	924.00	377.00	40	....
.....
.....
13,470.11	49,128.33	70,490.70	60,129.77	85	....
3,634.82	2,353.21	15,467.48	13,699.99	88	....
31,552.06	86,329.78	119,486.02	57,426.12	48	6
110,480.67	89,993.72	354,397.26	81,207.30	22	(f)
16,599.30	.....	6,468.96	2,886.34	44	....
.....	.....	580.00	390.00	67	....
7,765.86	1,447.16	26,938.36	19,335.57	71	4
6,045.59	15,161.95	33,154.99	26,113.53	78	6
63,371.27	25,691.48	87,280.79	70,791.11	81	10
.....	675.35	770.95	1,018.60	132	....
311.15	52.44	2,003.84	1,667.33	83	....
8,208.68	.....	33,399.59	14,162.89	42	12
22,216.56	44,209.44	8,126.12	4,132.97	50	....
6,855.48	2,156.24	8,971.09	5,418.98	60	10
150.00	200.00	3,316.43	3,798.14	114	....
1,048.76	100.00	6,966.22	2,898.72	41	29
.....	.....	10,122.78	8,456.00	83	....
369.15	308.85	818.84	758.54	92	....
2,616.43	407.88	9,494.39	3,351.55	35	12
4,410.67	14,314.91	5,932.27	4,571.11	77	....
1,730.03	541.58	7,898.48	4,779.81	60	4
83,251.08	209,867.72	143,188.18	113,540.62	79	(g)
32,061.31	25,322.86	94,373.73	49,253.30	52	(h)
1,645.00	13,304.34	4,749.67	9,615.04	22	....
7,819.48	9,329.32	31,228.66	21,863.49	70	18 1/2
2,278.42	10,446.58	10,614.66	5,285.74	49	6
.....	.....	105.75	107.90	101	....
5,993.68	62,600.00	28,895.45	11,986.59	41	....
296,661.33	378,631.44	537,930.71	212,423.40	39	8
304.47	9,634.99	3,190.69	1,483.50	46	....
6,300.29	79,069.82	42,859.62	33,837.26	78	28
331.10	317.62	831.75	701.46	84	....
680.14	874.27	5,628.28	4,620.93	82	....
11.77	.....	1,097.60	929.65	84	5
7,410.77	17,816.27	30,773.83	18,149.60	58	(i) 7
27,440.22	51,486.77	239,319.46	189,800.72	79	8
3,933.83	32,748.45	5,966.17	8,183.27	137	....
479.04	25.00	1,500.00	1,259.73	83	5
3,450.22	8,950.00	20,317.70	15,926.71	78	....
32.24	114.76	1,000.00	800.00	80	....
4,215.55	921.88	34,422.66	24,727.47	71	8
4,754.60	3,477.29	10,966.14	6,744.51	61	8
916.14	161.48	4,835.38	3,483.37	72	1 1/2

ELECTRIC UTILITY

	Capital stock outstanding.	Funded debt outstanding.	Fixed capital— all departments.
Plaistow Electric Light & Power Co...	\$4,450.00	.....	\$6,879.50*
Plymouth Electric Light Co.....	4,450.00	.....	6,879.50*
Raymond Electric Co.....	5,000.00	\$5,000.00	10,972.41*
Rockingham County Light & Power Co.	1,000,000.00	600,000.00	2,069,381.13
Rumney Electric Co.....	1,378.00(c)	.....	1,378.00*
Salem Electric Light Co.....	15,000.00(c)	.....	17,950.00*
Spaulding & Frost**.....	1,200.00*	.....	1,200.00*
Sunapee Electric Light & Power Co...	20,000.00	.....	23,601.43*
Tilton Electric Light & Power Co.....	170,000.00	.....	178,657.05
Twin State Gas & Electric Co. Berlin (b) .....	.....	.....	333,817.00
Twin State Gas & Electric Co. Brattleboro (b) .....	.....	.....	671,657.36
Twin State Gas & Electric Co. Dover (b) .....	.....	.....	1,942,828.27
Twin State Gas & Electric Co. "Main Office"	2,750,000.00	3,725,000.00	5,683,606.68
Ware, Robert A. (d).....	.....	.....	.....
Warren Water & Light Co.....	7,700.00	1,500.00	9,301.89*
Wentworth Hall Electric Co.....	.....	.....	.....
Whitefield Electric Light Co.....	20,000.00	.....	12,500.00*
Windsor Electric Light Co.....	5,000.00	.....	42,948.12*
Wonalancet Electric Co.....	6,666.66(c)	.....	5,252.07*
Total	\$13,517,413.61	\$10,321,867.34	\$26,275,445.40

* Capital invested.

** Utility operated in connection with other business.

(a) No complete report given.

(b) Electric and gas.

(c) Investment.

(d) Authority given to operate on Jan. 29, 1914, but no service given during the fiscal

† This report covers a period of nine months.

(e) { Common capital stock, \$70,000, dividends paid, 6%.

{ Preferred capital stock, \$70,000, dividends paid, 5%.

(f) { Common capital stock, \$1,500,000, dividends paid, 4%.

{ Preferred capital stock, 500,000, dividends paid, 6%.

(g) { Common capital stock, \$150,000, dividends paid, 8%.

{ Preferred capital stock, \$150,000, dividends paid, 5¼%.

(h) { Common capital stock, \$250,000, dividends paid, 6%.

{ Preferred capital stock, \$230,000, dividends paid, 4¾%.

(i) 7% dividends paid on preferred stock.

{ Common capital stock, \$1,250,000, dividends paid, 4%.

{ Preferred capital stock, \$1,500,000, dividends paid, 5%.

STATISTICS—*Concluded.*

Cash and current assets excluding materials and supplies.	Current liabilities.	Total operating revenues.	Total operating expenses.	Operating ratio.	Dividends declared. %
\$1,049.46	\$2,718.33	\$1,823.27	\$1,048.50	57	....
2,372.40	278.36	11,681.29	10,349.29	90	....
1,028.54	890.43	4,191.86	4,058.53	96	....
34,183.64	353,020.96	284,837.14	275,602.55	96	....
60.00	.....	332.00	60.40	18	....
1,140.11	116.80	5,494.14	5,045.55	91	....
.....	.....	230.70	230.70	...	....
13,976.71	11,870.98	6,492.20	4,127.04	63	2 $\frac{1}{3}$
6,614.62	6,000.00	18,005.62	6,532.30	36	8 $\frac{1}{2}$
.....	.....	16,847.69	5,693.86	33	....
.....	.....	108,287.36	77,234.84	71	....
.....	.....	176,939.46	119,908.52	67	....
120,336.28	212,132.07	505,385.62	305,944.05	60	(j)
.....
3,222.08	999.17	1,155.92	974.99	...	....
.....	.....	75.00	75.00	...	....
1,133.46	6,800.00	4,996.89	4,765.39	91	....
.....	37,948.12	15,439.78	10,790.76	68	....
45.20	.....	127.30	763.29	59	....
<hr/> \$1,078,085.31	<hr/> \$2,213,032.61	<hr/> \$3,365,262.77	<hr/> \$3,587,966.76	<hr/>	<hr/>

period ending June 30, 1914.

PART VI.

REPORTS OF GAS UTILITIES.

For The Year Ending June 30, 1914.

P. J. ABBOTT & CO.

WILTON, N. H.

PARTNERSHIP.

P. J. Abbott, L. H. Baldwin, W. H. Emerson, Wilton, N. H.

HISTORY.

Partnership established, 1899. Each partner's interest, one third.
This plant is being operated in connection with another business.

LOCALITY SERVED.

Wilton.

GENERAL BALANCE SHEET.

Assets.

Cost of plant.....	\$865.00
Cash	30.28
Total	<u>\$895.28</u>

Liabilities.

Capital stock	\$865.00
Profit	30.28
Total	<u>\$895.28</u>

INCOME ACCOUNT.

Operating revenues	\$232.44
Operating expenses	
Materials and other expense.....	\$210.00
Taxes	2.63
Total operating expenses.....	<u>212.63</u>
Profit for year.....	\$19.81
Profit at beginning of year	10.47
Profit at close of year.....	<u>\$30.28</u>

CLAREMONT GAS LIGHT COMPANY.

CLAREMONT, N. H.

PRINCIPAL OFFICERS.

President, George H. Stowell; Clerk, Herbert H. Webb; Treasurer,
George A. Tenney, Claremont, N. H.

DIRECTORS.

Alvah W. Sulloway, Franklin, N. H.; William F. Richards, Newport,
N. H.; George H. Stowell, Frank P. Maynard, George A. Tenney, Ira G.
Colby, Claremont, N. H.

HISTORY.

Incorporated June 27, 1860, under special law of the State of New Hampshire. Amended February 23, 1905.

LOCALITY SERVED.

Claremont.

CAPITALIZATION.

Capital stock authorized and outstanding:	
Common, 500, par value \$100 per share, total.....	\$50,000.00
Dividends declared and paid during year:	
Common, 8%	4,000.00
Number of stockholders, 1; Monadnock Mills, in New Hampshire.	
Funded debt authorized and outstanding:	
First mortgage bonds, 1905-1925, par value (4,500 held in special fund)	50,000.00
Interest accrued and paid during year, 4%.....	2,000.00

BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$2,626.14
Accounts receivable—gas	3,397.21
Accounts receivable—sundry	1,055.92
	<hr/>
	\$7,079.27
Materials and supplies.....	6,049.22
Investments	4,500.00
Fixed capital—gas	134,126.00
Insurance paid	69.67
	<hr/>
Total	\$151,824.16

Liabilities.

Current liabilities:	
Taxes accrued	\$198.38
Consumers' deposits	73.94
Accounts payable	2,075.17
	<hr/>
	\$2,347.49
Funded debt	50,000.00
Sinking fund reserves.....	15,973.29
Reserve for depreciation.....	4,635.16
Capital stock—common	50,000.00
Surplus	28,868.22
	<hr/>
Total	\$151,824.16

SINKING FUND RESERVES.

For the retirement of \$50,000.00 4% gold bonds, due July 1, 1925	\$15,973.29
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INVESTMENTS.

Claremont Gas Light Co. gold bonds, maturing July 1, 1925, par cost and book value.....	\$4,500.00
Income accrued during year	163.33

FIXED CAPITAL.

Intangible gas capital.....	\$30,590.76
Land	5,000.00
Structures	5,000.00
Machinery and apparatus.....	31,330.73
Trunk lines and mains.....	36,529.90
Gas services	25,674.61
	<hr/>
	\$134,126.00

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting		\$28,849.73
Merchandise and jobbing revenue (net)		765.42
Total operating revenues		<u>\$29,615.15</u>
Operating expenses:		
Production	\$10,125.31	
Insurance	280.00	
General depreciation	4,635.16	
Miscellaneous	4,261.59	
Total operating expenses	<u>\$19,302.06</u>	
Taxes	778.78	
Uncollectible bills	432.38	
Total revenue deductions		<u>20,513.22</u>
Gross operating income		<u>\$9,101.93</u>
Non-operating revenues:		
Interest on note	\$55.83	
Income from investments	163.33	
Total non-operating revenues	<u>\$219.16</u>	
Non-operating expenses	<u>2,083.95</u>	
Net non-operating expenses		<u>1,864.79</u>
Gross income		<u>\$7,237.14</u>
Deductions from gross income:		
Interest on funded debt		<u>2,000.00</u>
Net income		<u>5,237.14</u>
Surplus at beginning of year		<u>29,883.52</u>
Total surplus		<u>\$35,120.66</u>
Net adjustments during year, Dr.		<u>2,252.44</u>
Adjusted balance (surplus)		<u>\$32,868.22</u>
Dividends		<u>4,000.00</u>
Surplus at close of year		<u>\$28,868.22</u>

METER AND SERVICE DATA.

Size of Meter.	Number in use at beginning of year.	Added during year.	Removed during year.	Number in use at close of year.
3-light	107	1	...	108
5-light	723	209	132	800
10-light	15	8	5	18
20-light	8	1	...	9
30-light	4	...	...	4
45-light	3	...	...	3
60-light	3	...	...	3
100-light	3	...	...	3
150-light	1	...	...	1
250-light	1	...	...	1

Street mains in use June 30, 1914:

	Cast iron, feet.
2-inch	17,060
4-inch	25,680
6-inch	10,560

Number of service pipes in use..... 928

Consumers:

Number at beginning of year.....	868
Added during year.....	219
Discontinued during year.....	137
Number at close of year.....	950

Gas Made and Sold During the Year.

Number of feet of gas made during the year:	
Water gas	22,484,600
Number of feet of gas sold by meter during the year	18,268,500
Number of feet of gas supplied to public lamps during the year.....	280,100
Number of feet of gas used at works and offices during the year.....	34,000
Total gas sold, used and on hand.....	18,582,600
Number of feet unaccounted for during the year.....	3,902,000

CONCORD GAS LIGHT COMPANY.

CONCORD, N. H.

PRINCIPAL OFFICERS.

President, Ferdinand A. Stillings; Clerk and Treasurer, Benjamin W. Couch; Auditor, John P. George, Concord, N. H.

DIRECTORS.

Ferdinand A. Stillings, Benjamin C. White, John P. George, Benjamin W. Couch, William L. Stevens, Harry H. Dudley, Harry G. Emmons, Concord, N. H.

HISTORY.

Incorporated July 10, 1850, under special law of the State of New Hampshire. Charter amended: July 15, 1854; June 29, 1866.

Not an operating company. Business is conducted by Concord Light & Power Company, lessee.

LOCALITY SERVED.

Concord, N. H.

CAPITAL STOCK.

Common, authorized and outstanding:	
3,000 shares, par value \$50 each, total.....	\$150,000.00
Dividends declared and paid during year, 8%.....	12,000.00
Special dividends of \$1.00 per share out of proceeds of sale electric plant.....	3,000.00
Number of stockholders, 126; number in New Hampshire, 100.	
Par value of capital stock held in New Hampshire.....	119,750.00

BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$6,439.47
Investments	2,517.18
Fixed capital	150,000.00
Total	\$158,956.65

Liabilities.

Capital stock	\$150,000.00
Surplus	8,956.65
Total	<u>\$158,956.65</u>

INVESTMENTS.

Nature of Investment.	Date of Maturity.	Par value.	Actual cost.	Carried on books at	Income accrued during year.
Bond:					
Atchison, Topeka & Santa Fe R. R.	1995	\$1,000	\$999.38	\$999.38	\$40.00
Bond:					
Welsbach Company	1930	500	461.55	461.55	25.00
Stock:					
Chicago Junction & Union Stock Yards R. R. ....	....	1,000	1,056.25	1,056.25	60.00
Total .....	....	<u>\$2,500</u>	<u>\$2,517.18</u>	<u>\$2,517.18</u>	<u>\$125.00</u>

INCOME ACCOUNT.

Non-operating revenues:	
Lease of gas plant.....	\$16,050.47
Income from investments.....	87.50
Total non-operating revenues.....	<u>\$16,137.97</u>
Non-operating expenses	464.47
Net income	<u>\$15,673.50</u>
Surplus at beginning of year.....	8,283.77
Total surplus	<u>\$23,957.27</u>
Net adjustments during year (Debit).....	.62
Adjusted balance	<u>\$23,956.65</u>
Dividends:	
On common stock.....	15,000.00
Surplus at close of year.....	<u>\$8,956.65</u>

CONCORD LIGHT AND POWER COMPANY.

CONCORD, N. H.

PRINCIPAL OFFICERS.

President, Benjamin A. Kimball; Vice-President, Edson J. Hill; Clerk, F. P. Andrews, Concord, N. H.; Treasurer, G. W. Curran; Manager, Walton Clark, Philadelphia, Pa.; Superintendent, A. J. Smith, Concord, N. H.

DIRECTORS.

F. P. Andrews, A. B. Cross, E. J. Hill, B. A. Kimball, Concord, N. H.; G. W. Curran, Philadelphia, Pa.; H. W. Stevens, F. A. Stillings, Concord, N. H.

HISTORY.

Incorporated April 21, 1893, under the general laws of the State of New Hampshire.

LOCALITY SERVED.

Concord.

CAPITAL STOCK.

Common, authorized and outstanding:	
4,000 shares, par value \$50 per share, total.....	\$200,000.00
Dividends declared and paid during year, 5%.....	10,000.00
Number of stockholders, 36; number in New Hampshire, 27.	
Par value of capital stock held in New Hampshire.....	77,000.00

BALANCE SHEET.

<i>Assets.</i>	
Cash and current assets:	
Cash	\$8,195.75
Accounts receivable	13,487.20
	<hr/>
	\$21,682.95
Materials and supplies.....	17,219.95
Fixed capital	298,227.06
Prepayments	550.63
	<hr/>
Total	\$337,680.59

Liabilities.

Current liabilities:	
Taxes accrued	\$2,864.05
Accounts payable	4,454.65
Accrued accounts	2,429.94
	<hr/>
	\$9,748.64
Optional reserves	762.46
Capital stock	200,000.00
Surplus	127,169.49
	<hr/>
Total	\$337,680.59

FIXED CAPITAL.

Plant and property.....	\$148,299.05
Extensions and improvement at works.....	19,095.57
Trunk lines and mains.....	37,408.45
Gas services	34,385.21
Gas meters	29,595.10
Street lamp extension.....	1,238.30
Construction B	10,272.57
Extension of works.....	17,932.81
	<hr/>
Total value of fixed capital.....	\$298,227.06

INCOME ACCOUNT.

Operating revenues:	
Commercial lighting	\$93,121.86
Merchandise and jobbing revenue—gas (net).....	310.08
Other operating revenues.....	16.56
	<hr/>
Total operating revenues.....	\$92,828.34
Operating expenses:	
Production	\$27,288.01
Transmission and distribution.....	7,079.49
Insurance	808.33
Miscellaneous	18,493.17
	<hr/>
Total operating expenses.....	\$53,669.00
Taxes	5,621.25
Uncollectible bills	244.75
	<hr/>
Total revenue deductions.....	59,535.00
	<hr/>
Gross operating income.....	\$33,293.34

Deductions from gross income:	
Special operating	\$17,109.92
Net income	\$16,183.42
Surplus at beginning of year.....	120,986.07
Total surplus	\$137,169.49
Dividends	10,000.00
Surplus at close of year.....	\$127,169.49

METER AND SERVICE DATA.

Size of Meter.	Number in use at beginning of year.	Added during year.	Removed during year.	Number in use at close of year.
2-light	66	8	9	65
3-light	1,600	548	518	1,630
5-light	2,518	913	805	2,626
10-light	68	42	44	66
20-light	45	22	23	44
30-light	30	11	13	28
50-light	8	1	1	8
45-light	2	...	...	2
60-light	13	1	2	12
100-light	7	...	...	7

Street mains in use June 30, 1914:

	Cast iron, feet.
2 ½ inch and under.....	46,099
3-inch	16,271
4-inch	80,370
6-inch	28,225
8-inch	8,463
10-inch	4,449
12-inch	4,545

Number of service pipes in use..... 3,395

Consumers:

Number at beginning of year.....	4,287
Added during year.....	132
Discontinued during year, none.	
Number at close of year.....	4,419

Gas Made and Sold During the Year.

Number of feet on hand at beginning of year.....	70,300
Number of feet of gas made during the year:	
Water gas	86,651,100
Total gas made and on hand.....	86,721,400
Number of feet of gas sold by meter during the year	77,257,900
Number of feet of gas supplied to private lamps during the year	314,079
Number of feet of gas used at works and offices during the year.....	703,200
Number of feet of gas on hand at close of year	70,900
Total gas sold, used and on hand.....	78,346,079
Number of feet unaccounted for during the year.....	8,375,321

DOVER.

(See Twin State Gas & Electric Company.)

(Electric Utilities—Part V.)

EXETER GAS LIGHT COMPANY.

EXETER, N. H.

PRINCIPAL OFFICERS.

President, Odiorne Swain, Boston, Mass.; Clerk and Superintendent, Arthur F. Cooper, Exeter, N. H.; Treasurer, A. Parker Browne, Boston, Mass.

DIRECTORS.

Odiorne Swain, Boston, Mass.; William Burlingame, Arthur F. Cooper, Exeter, N. H.; John Collomore Hatch, A. Parker Browne, Boston, Mass.

HISTORY.

Incorporated July 14, 1854, under special law of the State of New Hampshire. Charter amended: June 28, 1859; June 20, 1862.

LOCALITY SERVED.

Exeter.

CAPITALIZATION.

Capital stock:

Common, authorized, 1,000 shares, par value \$50 each,	
total	\$50,000.00
Dividends declared and paid during year, 7%	3,500.00
Number of stockholders, 39; number in New Hampshire, 3.	
Par value of stock held in New Hampshire	2,200.00

BALANCE SHEET.

Assets.

Cash and current assets:

Cash	\$650.69	
Accounts receivable—gas	3,029.15	
Accounts receivable—sundry	870.15	
		\$4,549.99
Materials and supplies		4,960.44
Prepayments		125.64
Plant		56,616.14
Construction work in progress		2,640.72
Total		\$68,892.93

Liabilities.

Current liabilities:

Bills payable (promissory notes)	\$1,000.00	
Accounts payable	508.42	
Customers' deposits	500.00	
		\$2,008.42
Reserve for depreciation		1,000.00
Capital stock—common		50,000.00
Surplus		15,884.51
Total		\$68,892.93

INVESTMENTS.

Nature of investment:

House and lot—

Actual cost	\$1,500.00
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FIXED CAPITAL.

Land	\$2,950.00
Structures	12,500.00
Machinery and apparatus.....	13,513.50
Trunk lines and mains.....	19,066.81
Gas services	3,892.01
Gas meters	4,693.82
Total cost of fixed capital.....	\$56,616.14
Less reserve for depreciation.....	1,000.00
Total (net) value of fixed capital.....	\$55,616.14

INCOME ACCOUNT.

Operating revenues:

Commercial lighting	\$19,616.08
Merchandise and jobbing revenue (net)...	1,086.94
Other operating revenues.....	2,168.32

Total operating revenues.....	\$22,871.34
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Operating expenses:

Production	\$9,227.91
Transmission and distribution.....	6,324.84
Insurance	149.24
General depreciation	1,000.00

Total operating expenses.....	\$16,701.99
Taxes	613.18

Total revenue deductions.....	17,315.17
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Gross operating income.....	\$5,556.17
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Deductions from gross income:

Interest on unfunded debt.....	6.07
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Net income	\$5,550.10
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Surplus at beginning of year.....	13,834.41
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Total surplus	\$19,384.51
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Dividends	3,500.00
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Surplus at close of year.....	\$15,884.51
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METER AND SERVICE DATA.

Size of Meter.	Number in use at beginning of year.	Added during year.	Removed during year.	Number in use at close of year.
2-light	8	...	...	8
3-light	350	53	52	351
5-light	382	81	59	404
10-light	11	1	1	11
20-light	10	...	...	10
30-light	9	...	...	9
45-light	1	...	...	1
60-light	1	...	...	1
80-light	1	...	...	1
150-light	1	1	1	1

	Cast iron, ft.	Wrought iron, ft.
Street mains in use June 30 1914:		
2-inch .....	.....	5,524
3-inch	29,510	3,324
4-inch	8,119	....
6-inch	3,775	....
10-inch	800	....

Gas Made and Sold During the Year.

Number of feet on hand at beginning of year.....	42,400
Number of feet of gas made during the year:	
Coal gas	13,429,200
Total gas made and on hand.....	13,471,600
Number of feet of gas sold by meter dur- ing the year.....	11,482,000
Number of feet of gas used at works and of- fices during the year.....	228,700
Number of feet of gas on hand at close of year	65,000
Total gas sold, used and on hand.....	11,775,700
Number of feet unaccounted for during the year.....	1,695,900

KEENE.

(See Keene Gas and Electric Company.)

(Electric Utilities—Part V.)

LACONIA.

(See Laconia Gas and Electric Company.)

(Electric Utilities—Part V.)

MANCHESTER GAS LIGHT COMPANY.

MANCHESTER, N. H.

PRINCIPAL OFFICERS.

President, William J. Hoyt; Clerk, Nathan P. Hunt, Treasurer, Walter M. Parker, Manchester, N. H.

DIRECTORS.

William J. Hoyt, Nathan P. Hunt, W. Byron Stearns, Albert L. Clough, Walter M. Parker, Manchester, N. H.

HISTORY.

Incorporated July 10, 1850, under special law of the State of New Hampshire.

Not an operating company. Business is conducted by The Peoples Gas Light Company, lessee, under a 50-year contract from July 1, 1887.

LOCALITY SERVED.

Manchester, N. H.

CAPITAL STOCK.

Common, authorized, and outstanding, 100 shares, par value..	\$100,000.00
Number of stockholders, 81; number in New Hampshire, 61.	
Par value of stock held in New Hampshire.....	91,700.00
Dividends declared during year, 32%.....	32,000.00

BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$28,205.26
Fixed capital	90,000.00
Total	\$118,205.26

Liabilities.

Capital stock	\$100,000.00
Surplus	18,205.26
Total	\$118,205.26

FIXED CAPITAL.

Fixed capital	\$90,000.00
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The company has been leased for 27 years and the respondent is unable to make a sub-division.

INCOME ACCOUNT.

Non-operating revenues:	
Received as per contract	\$32,500.00
Interest on bank deposits.....	560.70
Total non-operating revenues.....	\$33,060.70
Non-operating expenses	606.87
Net non-operating revenues.....	\$32,453.83
Dividends	32,000.00
Net income	\$453.83
Surplus at beginning of year.....	17,751.43
Surplus at close of year.....	\$18,205.26

NASHUA.

(See Nashua Light, Heat and Power Company.)

(Electric Utilities—Part V.)

NEW LONDON ACETYLENE COMPANY.

NEW LONDON, N. H.

PRINCIPAL OFFICERS.

President, Justin O. Wellman; Clerk and Treasurer, A. H. Smith; General Manager, Chas. E. Shepard, New London, N. H.

DIRECTORS.

James E. Shepard, Justin O. Wellman, Almond H. Smith, C. C. Gardner, New London, N. H.; H. H. Nichols, Haverhill, Mass.

HISTORY.

Incorporated, April 30, 1906, under the general laws of the State of New Hampshire.

CAPITAL STOCK.

Common, authorized, 120 shares outstanding, par value \$25 each, total	\$1,625.00
Dividends declared during year, none.	
Number of stockholders 9, number in New Hampshire 8.	
Par value of stock held in New Hampshire	925.00

BALANCE SHEET.

Assets.

Cost of plant	\$1,800.00
Cash	97.24
Items receivable	620.55
Loss	957.21
Total	<hr/> \$3,475.00

Liabilities.

Capital stock	\$1,375.00
Items payable	2,100.00
Total	<hr/> \$3,475.00

INCOME ACCOUNT.

Operating revenues:		
Earnings from street lighting	\$300.00	
Other earnings	1,098.92	
Total operating revenues		\$1,398.92
Operating expenses:		
Materials and other expense	\$1,009.85	
Taxes	15.50	
Total operating expenses		<hr/> 1,025.35
Net earnings		\$373.57
Interest		126.00
Profit for year		<hr/> \$247.57

MISCELLANEOUS.

The company operates a small acetylene plant which was constructed in 1906.

It is used for the purpose of lighting the main street and a few houses in the center of the town of New London.

No record of number of feet sold.

Consumers, 32.

Street lamps, 15.

THE PEOPLES GAS LIGHT COMPANY.

MANCHESTER, N. H.

PRINCIPAL OFFICERS.

President, Arthur M. Heard; Vice-President, Thomas R. Varick; Clerk, Treasurer and Manager, Walter G. Africa, Manchester, N. H.; Comptroller, G. W. Curran, Philadelphia, Pa.

DIRECTORS.

Arthur M. Heard, Manchester, N. H.; George W. Curran, Philadelphia, Pa.; Walter M. Parker, Walter G. Africa, W. Byron Stearns, Thomas R. Varick, Manchester, N. H.

HISTORY.

Incorporated March 2, 1887, under the general laws of the State of New Hampshire. Amended: August 8, 1910.

LOCALITY SERVED.

Manchester, N. H.

CAPITALIZATION.

Capital stock, authorized and outstanding:	
5,000 shares, par value	\$500,000.00
Dividends declared and paid during year, 6%.....	30,000.00
Number of stockholders, 46; number in New Hampshire, 39.	
Par value of stock held in New Hampshire.....	219,000.00

BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$13,741.10	
Accounts receivable	44,031.70	
		\$57,772.80
Materials and supplies		61,807.78
Investments		65,605.83
Fixed capital (gas).....		500,722.52
Prepayments		1,360.16
Suspense		12,329.50
Private lamp extension		970.15
Amount receivable reserve fund.....		3,100.00
		<hr/>
Total		\$703,668.74

Liabilities.

Current liabilities:		
Taxes accrued	\$8,639.09	
Consumers' deposits	3,159.77	
Accounts payable	20,398.02	
		<hr/>
Optional reserves		\$32,196.88
Capital stock		749.22
Capital stock		500,000.00
Reserve fund payments and accruals.....		70,881.66
Amount payable reserve fund.....		3,100.00
Surplus		96,740.98
		<hr/>
Total		\$703,668.74

SUSPENSE.

Accident and damage reserve.....	\$1,199.81
Rate litigation	11,129.69
Total	<u>\$12,329.50</u>

INVESTMENTS.

	Par value.	Actual cost and book value.	Income accrued during year.
Charleston Consolidated Railway lighting Co., common stock.....	\$51,500.00	\$48,484.58	\$3,090.00
Essex & Hudson Gas & Electric Co., capital stock	2,500.00	3,512.50	200.00
The Patterson & Passaic Gas & Elec- tric Co., capital stock.....	2,500.00	2,350.00	124.99
Hudson County Gas Co., capital stock	4,600.00	6,066.75	368.00
Manchester Gas Light Co., capital stock	800.00	5,192.00	128.00
Total	<u>\$61,900.00</u>	<u>\$65,605.83</u>	<u>\$3,910.99</u>

FIXED CAPITAL.

Real estate	\$81.35
Extension and improvement at works.....	167,739.52
Trunk lines and mains.....	139,457.62
Gas services	76,777.84
Gas meters	63,763.02
Other tangible gas capital.....	52,903.17
Total	<u>\$500,722.52</u>

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting	\$264,590.59	
Merchandise and jobbing revenue—gas (net)	78.47	
Other operating revenues.....	162.38	
Total operating revenues.....		<u>\$264,674.50</u>
Operating expenses:		
Production	\$100,726.00	
Transmission and distribution.....	22,828.80	
Insurance	1,125.07	
Miscellaneous	38,974.41	
Total operating expenses.....	<u>\$163,654.28</u>	
Taxes	18,726.96	
Uncollectible bills	1,246.27	
Total revenue deductions		<u>183,627.51</u>
Gross operating income.....		<u>\$81,046.99</u>
Non-operating revenues:		
Interest on bank deposits.....	\$516.98	
Income from investments.....	3,910.99	
Net non-operating revenues.....		<u>\$4,427.97</u>
Gross income		<u>\$85,474.96</u>

Deductions from gross income:		
Rental	\$32,500.00	
Reserve fund payments and accruals.....	8,410.99	
Total deductions from gross income.....		\$40,910.99
Net income		\$44,563.97
Surplus at beginning of year.....		82,177.01
Total surplus		\$126,740.98
Dividends		30,000.00
Surplus at close of year.....		\$96,740.98

METER AND SERVICE DATA.

Size of Meter.	Number in use at begin- ning of year.	Added during year.	Removed during year.	Number in use at close of year.
3-light	3,105	1,071	1,178	2,998
5-light	7,953	4,535	3,695	8,793
10-light	384	188	186	386
20-light	82	13	18	77
30-light	84	21	19	86
50-light	43	10	10	43
45-light	9	2	2	9
60-light	5	1	1	5
80-light	6	2	2	6
100-light	30	6	8	28
150-light	7	3	3	7
200-light	1	0	0	1
250-light	1	1	1	1
			Cast iron.	Wrought iron.
			ft.	ft.
Street mains in use June 30, 1914:				
2½-inch and under				49,696
3-inch			75,724	
4-inch			169,602	
6-inch			84,282	
8-inch			21,392	
10-inch			17,690	
12-inch			10,149	
14-inch			1,589	
16-inch			1,346	
20-inch			729	
Number of service pipes in use				6,962
Consumers:				
Number at beginning of year				11,710
Added during year				5,853
Discontinued during year				5,123
Number at close of year				12,440

Gas Made and Sold During the Year.

Number of feet on hand at beginning of year.....	853,000
Number of feet of gas made during the year:	
Coal gas	77,744,000
Water gas	180,461,000
Total gas made	258,205,000
Total gas made and on hand.....	259,058,000
Number of feet of gas sold by meter during the year	237,461,700
Number of feet of gas supplied to ornamental lamps during the year.....	1,223,500
Number of feet of gas used at works and offices during the year.....	1,851,700
Number of feet of gas on hand at close of year	1,074,000
Total gas sold, used and on hand.....	241,610,900
Number of feet unaccounted for during the year.....	17,447,100

PITTSFIELD GAS COMPANY.

PITTSFIELD, N. H.

PRINCIPAL OFFICERS.

President, Sherburne J. Winslow; Clerk, Nathaniel S. Drake; Treasurer, Herbert T. Fischer; Auditors, S. J. Winslow and N. S. Drake; Superintendent, Nathaniel M. Batchelder, Pittsfield, N. H.

DIRECTORS.

Sherburne J. Winslow, Chas. H. Lane,* Nathaniel S. Drake, Nathaniel M. Batchelder, Pittsfield, N. H.; William A. Goss, Dover, N. H.

HISTORY.

Incorporated January 24, 1888, under the general laws of the State of New Hampshire.

LOCALITY SERVED.

Pittsfield, N. H.

CAPITAL STOCK.

Number of shares authorized:	
Common stock, 300, par value \$50 per share.	
Total par value authorized and outstanding.....	\$15,000.00
Dividends:	
Amount declared during year, none.	
Number of stockholders 14, number of stockholders in New Hampshire 10.	
Par value of capital stock held in New Hampshire.....	14,100.00

BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$142.31
Accounts receivable	451.29
	<hr/>
	\$593.60
Materials and supplies.....	205.00
Fixed capital	15,000.00
	<hr/>
Total	\$15,798.60

Liabilities.

Current liabilities:	
Taxes accrued	\$64.50
Reserve for depreciation	500.00
Capital stock	15,000.00
Surplus	234.10
	<hr/>
Total	\$15,798.60

FIXED CAPITAL.

Intangible gas capital.....	\$5,000.00
Land	6,000.00
Gas services	4,000.00
	<hr/>
Total cost of fixed capital	\$15,000.00
Less reserve for depreciation	500.00
	<hr/>
Total value of fixed capital	\$14,500.00

*Died August 23, 1914.

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting		\$1,441.88
Operating expenses:		
Production	\$745.95	
Transmission and distribution.....	253.85	
General depreciation	500.00	
Miscellaneous	132.65	
Total revenue deductions		1,632.45
Net loss		\$190.57
Surplus at beginning of year.....		\$424.67
Surplus at close of year.....		234.10

METER AND SERVICE DATA.

Size of meter.	Number in use at beginning of year.	Removed during year.	Number in use at close of year.
3-light	52	19 (Not used; still in place.)	52
Street mains in use June 30, 1913:			
Length—wrought iron:			
2-inch			8,150 ft.
4-inch			2,950 ft.
Number of service pipes in use			67
Number of consumers.....			52
Gas made and sold during year, no record.			

PORTSMOUTH GAS COMPANY.

PORTSMOUTH, N. H.

PRINCIPAL OFFICERS.

President, E. H. Palmer; Vice-President, H. K. Seybolt, Geneva, N. Y.; Treasurer, General Manager and Superintendent, E. Seybolt, Portsmouth, N. H.

DIRECTORS.

E. H. Palmer, H. K. Seybolt, C. J. Root, A. D. Redner, Geneva, N. Y.; E. Seybolt, Portsmouth, N. H.

HISTORY.

Incorporated under the laws of the State of Maine.

LOCALITY SERVED.

Portsmouth.

CAPITALIZATION.

Common stock, authorized and outstanding, 1,000 shares, par value	\$100,000.00
Dividends declared during year, none.	
Preferred, authorized, 1,000 shares, outstanding, 150 shares, par value	15,000.00
Dividends declared and paid during year, 5%.....	2,250.00
Number of stockholders, 6; number in New Hampshire, 1.	
Par value of stock held in New Hampshire.....	61,000.00

Funded debt, par value authorized and outstanding:		
First mortgage bonds, 1911-1931, authorized \$200,000.00;		
outstanding		\$130,000.00
Interest accrued and paid during year, 5%.....		6,500.00

BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$2,412.43	
Accounts receivable—gas	3,648.94	
Accounts receivable—sundry	4,661.95	
Other current assets.....	67.50	
		<hr/>
		\$10,790.82
Materials and supplies.....		3,718.02
Investments		100.00
Fixed capital		237,059.10
Unextinguished discount on securities.....		11,536.19
Suspense		2,825.57
Reacquired securities		85,000.00
		<hr/>
Total		\$351,029.70

Liabilities.

Current liabilities:		
Interest accrued on funded debt.....	\$1,625.00	
Bills payable (promissory notes).....	10,585.00	
Consumers' deposits	50.00	
		<hr/>
		\$12,260.00 -
Funded debt		130,000.00
Capital stock—preferred		100,000.00
Capital stock—common		100,000.00
Surplus		8,769.70
		<hr/>
Total		\$351,029.70

SUSPENSE.

Amount expended in fitting up the block in which the office is located	\$2,825.57
--	------------

FIXED CAPITAL.

Land	\$20,925.00
Structures	40,195.03
Machinery and apparatus.....	60,668.14
Trunk lines and mains.....	62,478.93
Gas services	25,529.91
Gas meters	21,391.08
Municipal street lighting system.....	368.05
General equipment	1,439.67
Miscellaneous expenditures during construction.....	3,723.29
Other tangible gas capital.....	340.00
	<hr/>
Total cost of fixed capital.....	\$237,059.10

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting	\$43,682.13	
Municipal lighting	205.18	
Merchandise and jobbing revenue.....	572.87	
Other operating revenues (net).....	9,539.52	
	<hr/>	
Total operating revenues.....		\$53,999.70
Operating expenses:		
Production	\$24,076.66	
Transmission and distribution.....	8,391.42	
Insurance	188.96	
	<hr/>	
Total operating expenses.....	\$32,657.04	

Taxes	\$4,549.32	
Uncollectible bills	413.10	
Total revenue deductions.....		\$37,619.46
Gross operating income.....		\$16,380.24
Deductions from gross income:		
Interest on funded debt.....	\$6,500.00	
Interest on unfunded debt	606.31	
Total deductions from gross income.....		7,106.31
Net income		\$9,273.93
Surplus at beginning of year.....		1,745.77
Total surplus		\$11,019.70
Dividends		2,250.00
Surplus at close of year.....		\$8,769.70

METER AND SERVICE DATA.

Size of Meter.	Number in use at beginning of year.	Added during year.	Removed during year.	Number in use at close of year.
3-light	379	47	69	357
5-light	1,289	521	376	1,434
10-light	35	7	4	38
20-light	30	14	3	41
30-light	9	1	...	10
45-light	2	...	...	2
60-light	3	...	...	3
100-light .....	....	1	...	1

	Cast iron, ft.	Wrought iron, ft.
Street mains in use June 30, 1914:		
1 1/4-inch .....	.....	844
2-inch	4,600	9,012
3-inch	16,100	17,791
4-inch	15,975	17,576
6-inch	6,005	.....
8-inch	3,205	.....
10-inch	1,985	.....
12-inch	899	.....
Number of service pipes in use.....		1,838
Consumers:		
Number at beginning of year.....		1,748
Added during year.....		138
Number at close of year.....		1,886

Gas Made and Sold During the Year.

Number of feet on hand at beginning of year.....	113,000
Number of feet of gas made during the year:	
Coal gas	37,477,000
Total gas made and on hand.....	37,590,000

Number of feet of gas sold by meter during the year	33,109,900	
Number of feet of gas supplied to public lamps during the year.....	131,900	
Number of feet of gas used at works and offices during the year	1,089,400	
Number of feet of gas on hand at close of year	103,000	
Total gas sold, used and on hand.....		34,434,200
Number of feet unaccounted for during the year.....		3,155,800

ROCHESTER.

(See Strafford-York Gas Company.)

SOMERSWORTH.

(See Strafford-York Gas Company.)

STRAFFORD-YORK GAS COMPANY.

ROCHESTER AND SOMERSWORTH, N. H.

PRINCIPAL OFFICERS.

President, Lyman T. Dyer, New York City; Vice-President, Wm. T. Gunnison, Rochester, N. H.; Treasurer, Fitzhugh C. Speer, New York City; General Manager, E. C. Andrews, Somersworth, N. H.

DIRECTORS.

Lyman T. Dyer, H. L. Crawford, Fitzhugh C. Speer, New York City.

HISTORY.

Incorporated May 6, 1911, under the general laws of the State of New Hampshire.

This company bought the physical properties of the Rochester Gas Light Company and the Great Falls Gas Company.

LOCALITIES SERVED.

Rochester, East Rochester, Gonic and Somersworth, N. H., and Berwick, Me.

CAPITAL STOCK.

Authorized and outstanding:	
Common, 1,800 shares, par value.....	\$180,000.00
Dividends declared during year, none.	
Preferred, 1,500 shares, par value.....	150,000.00
Dividends declared and paid during year, 5%.....	7,500.00
Number of stockholders, 15; number in New Hampshire, none.	

BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$9,420.09	
Accounts receivable—gas	3,312.89	
Accounts receivable—sundry	412.57	
		<hr/>
Materials and supplies		\$13,145.55
Fixed capital		3,357.35
Prepayments		322,884.05
		<hr/>
Total		121.12
		<hr/>
Total		\$339,508.07

Liabilities.

Current liabilities:		
Taxes accrued	\$669.32	
Accounts payable	5,743.21	
		<hr/>
Capital stock—preferred		\$6,412.53
Capital stock—common		150,000.00
Surplus		180,000.00
		<hr/>
Total		3,095.54
		<hr/>
Total		\$339,508.07

FIXED CAPITAL.

Organization	\$8,992.22
Royalties, franchises and licenses	20,000.00
Other intangible gas capital	449.12
Land	15,000.00
Structures	72,069.16
Machinery and apparatus	51,214.58
Trunk lines and mains }	129,814.18
Gas services }	
Gas meters	17,067.73
General equipment	8,277.06
	<hr/>
Total cost of fixed capital	\$322,884.05

INCOME ACCOUNT.

Operating revenues:		
Commercial lighting and fuel	\$39,473.66	
Merchandise and jobbing revenue (net) ..	381.76	
Other operating revenues	82.51	
		<hr/>
Total operating revenues		\$39,174.41
Operating expenses:		
Production	\$24,968.00	
Transmission and distribution	2,988.04	
Insurance	87.58	
Miscellaneous	4,309.63	
		<hr/>
Total operating expenses	\$32,353.25	
Taxes	2,023.39	
		<hr/>
Total revenue deductions		34,376.64
		<hr/>
Net income		\$4,797.77
Surplus at beginning of year		5,797.77
		<hr/>
Total surplus		\$10,595.54
Dividends on preferred stock		7,500.00
		<hr/>
Surplus at close of year		\$3,095.54

METER AND SERVICE DATA.

Size of meter.	Number in use at beginning of year.	Added during year.	Removed during year.	Number in use at close of year.
3-light	828	135	128	835
5-light	172	42	43	171
10-light	34	6	5	35
20-light	3	3	...	6
30-light	4	4	...	8
40-light	3	...	...	3
45-light	3	...	...	3
60-light	4	1	...	5
80-light	4	...	2	2
100-light	5	...	1	4
150-light	1	...	...	1
200-light	10	1	...	11
Street mains in use June 30, 1914:			Cast iron. ft.	Steel. ft.
2-inch			38,921	20,360
3-inch			16,899	1,512
4-inch			8,400	.....
6-inch			7,080	.....
8-inch			2,160	.....

Gas Made and Sold During Year.

Number of feet on hand at beginning of year.....		69,965
Number of feet of gas made during the year:		
Coal gas	672,500	
Water gas	35,986,505	
Total gas made.....		36,659,005
Total gas made and on hand.....		36,728,970
Number of feet of gas sold by meter during the year	33,013,694	
Number of feet of gas used at works and offices during the year.....	537,700	
Number of feet of gas on hand at close of year	68,970	
Total gas sold, used and on hand.....		33,620,364
Number of feet unaccounted for during the year.....		3,108,606

TWIN STATE GAS & ELECTRIC COMPANY.

(See Electric Utilities, Part V.)

WILTON.

(See P. J. Abbott & Co.)

WINCHESTER GAS LIGHT COMPANY.

WINCHESTER, N. H.

PRINCIPAL OFFICERS.

President and General Manager, John P. Ball, Winchester, N. H.; Clerk, F. D. Lisme, Fitchburg, Mass.; Treasurer, J. H. Bliss, Winchester, N. H.

DIRECTORS.

John P. Ball, W. D. Ripley, Winchester, N. H.; F. D. Lisme, Fitchburg, Mass.; J. H. Bliss, Winchester, N. H.

LOCALITY SERVED.

Winchester, N. H.

(The operation of this plant was discontinued during this fiscal year.)

GAS UTILITY

	Capital stock outstanding.	Funded debt outstanding.	Fixed capital all departments.
Abbott, P. J. Co.**	\$865.00*		\$865.00*
Claremont Gas Light Co.	50,000.00	\$50,000.00	134,126.00
Concord Gas Light Co.	150,000.00		150,000.00
Concord Light & Power Co.	200,000.00		298,227.06
Exeter Gas Light Co.	50,000.00		56,616.14
Keene Gas & Electric Co.†			
Laconia Gas & Electric Co.†			
Manchester Gas Light Co., The	100,000.00		90,000.00
Nashua Light, Heat & Power Co.†			
New London Acetylene Co.	1,375.00		1,800.00*
Peoples Gas Light Co., The	500,000.00		500,722.52
Pittsfield Gas Co.	15,000.00		15,000.00
Portsmouth Gas Co.	200,000.00	130,000.00	237,059.10
Strafford-York Gas Co.	330,000.00		322,884.05
Twin State Gas & Electric Co.†			
Winchester Gas Light Co.***			
	<hr/> \$1,597,240.00	<hr/> \$180,000.00	<hr/> \$1,807,299.87

* Capital invested.

** This company is operated in connection with another business.

***The operation of this plant was discontinued during this fiscal year.

† See Electric Utilities.

STATISTICS.

Cash and current assets, excluding materials and supplies.	Current liabilities.	Total operating revenues.	Total operating expenses.	Operating ratio.	Dividends declared. %
\$30.28	.....	\$232.44	\$212.63	91	....
7,079.27	\$2,347.49	29,615.15	20,513.22	69	8
6,439.47	.....	.....	.....	...	8
21,682.95	9,748.64	92,828.34	59,535.00	64	5
4,549.99	2,008.42	22,871.34	17,315.17	75	7
.....
.....
28,205.26	.....	.....	.....	...	32
.....
717.79	2,100.00	1,398.92	1,025.35	73	6
57,772.80	32,196.88	264,674.50	183,627.51	69	5
593.60	64.50	1,441.88	1,632.45	113	....
10,790.82	12,260.00	53,999.70	37,619.46	69	....
13,145.55	6,412.53	39,174.41	34,376.64	87	....
.....
.....
<hr/> \$151,007.73	<hr/> \$67,138.46	<hr/> \$506,236.68	<hr/> \$355,857.43	<hr/> ...	<hr/>

PART VII.

REPORTS OF TELEGRAPH UTILITIES.

For The Year Ending June 30, 1914.

AMERICAN TELEGRAPH COMPANY.

KEENE, N. H.

PRINCIPAL OFFICERS.

President, R. S. Calef; Treasurer and Superintendent, G. F. Barker, Keene, N. H.

DIRECTORS.

R. S. Calef, G. F. Barker, Keene, N. H.; G. W. Gleason, Dublin, N. H.; E. B. Butterfield, Westmoreland, N. H.; W. H. Ellis, Providence, R. I.

HISTORY.

Incorporated June 23, 1859, under special law of the State of New Hampshire as the Nashua, Milford, and Peterborough Telegraph Company. Name changed June 24, 1868.

LOCALITIES SERVED.

Hinsdale, Swanzey, Keene, Marlboro, Chesham, Harrisville, Dublin and Peterborough.

CAPITAL STOCK.

Common, authorized and outstanding:	
562 shares, par value, \$25 each, total.....	\$14,050.00
Dividends declared and paid during year, none.	
Number of stockholders, 75; number in New Hampshire, and par value held in New Hampshire, not definitely known.	

BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$217.94
Materials and supplies.....	75.00
Fixed capital	7,200.00
Deficit	6,597.06
Total	\$14,090.00

Liabilities.

Current liabilities:	
Taxes accrued	\$40.00
Capital stock	14,050.00
Total	\$14,090.00

FIXED CAPITAL.

Telegraph office equipment.....	\$800.00
Pole lines	4,600.00
Aerial wire	1,800.00
Total cost of fixed capital.....	\$7,200.00

INCOME ACCOUNT.

Operating revenues:	
Commercial telegraph tolls.....	\$2,013.85

Operating expenses:	
Repairs of line and equipment.....	\$254.92
Other maintenance expenses.....	171.32
Total maintenance	\$426.24
Conducting operations:	
Pay of managers, operators and attendants	\$1,437.63
Office supplies and expenses.....	44.60
Total conducting operations.....	\$1,482.23
Taxes	40.00
Total revenue deductions.....	\$1,948.47
Net income	\$65.38
Deficit at beginning of year.....	6,542.42
Total deficit	\$6,477.04
Net adjustments during year.....	120.02
Deficit at close of year.....	\$6,597.06

WIRE PLANT DATA.

Miles of poles, 40; miles of iron wire, 43.

THE GREAT NORTH WESTERN TELEGRAPH COMPANY OF CANADA.

TORONTO, ONTARIO.

PRINCIPAL OFFICERS.

President, Z. A. Lash, Toronto, Ont.; Vice-President, Adam Brown, Hamilton, Ont.; Clerk, Secretary and Auditor, A. C. McConnell; Treasurer, D. E. Henry; General Manager, George D. Perry, Toronto, Ont.

DIRECTORS.

Adam Brown, Hamilton, Ont.; Newcomb Carlton, New York, N. Y.; F. B. Hayes, Jas. Hedley, A. Jarvis, Hon. J. K. Kerr, Z. A. Lash, Toronto, Ont.; E. Z. Gallaher, New York, N. Y.

HISTORY.

Incorporated May 7, 1880, under special act of Parliament, 43 Victoria, Chapter 66, Dominion of Canada.

OFFICES MAINTAINED IN NEW HAMPSHIRE.

Berlin, Gorham, Groveton, North Stratford, Percy, Shelburne, Stratford Hollow and West Milan.

This company has leased the lines of the Montreal Telegraph Company and the Dominion Telegraph Co.

The Dominion Telegraph Co. owns no lines in the State of New Hampshire.

CAPITAL STOCK.

Number of shares authorized:

Common stock	5,000
Par value of one share.....	\$100.00
Total par value authorized.....	500,000.00
This stock was issued at \$25 per share.	

Dividends:

Amount declared during year, none.

Number of stockholders, 35.

Number of stockholders in New Hampshire, none.

Par value of capital stock held in New Hampshire, none.

THE GREAT NORTH WESTERN TELEGRAPH COMPANY. 451

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$23,085.84	
Accounts receivable:		
From system corporations.....	195,905.66	
From subscribers and agents.....	80,578.34	
Miscellaneous accounts receivable.....	71,552.85	
Working advances to employes.....	5,590.00	
		<u>\$376,712.69</u>
Materials and supplies.....	20,085.72	
Investments	12,501.00	
Fixed capital—property account.....	104,655.26	
Leasehold interest Montreal Tel. Co.....	263,541.00	
Leasehold interest Dominion Tel. Co.....	4,613.79	
Construction work in progress.....	1,288.05	
Leasehold interest in Dominion Tel. Co., bond account....	193,886.83	
Custom work in progress.....	18,858.97	
		<u>\$996,143.31</u>
Total		\$996,143.31

Liabilities.

Current liabilities:		
Taxes accrued	\$6,723.76	
Unearned revenue	858.76	
Loan from system corporations.....	293,860.00	
Accounts payable:		
Accounts with system corporations.....	154,370.83	
Audited vouchers and wages unpaid.....	26,303.29	
Reserve for contingencies.....	17,385.92	
Reserve for reconstruction.....	10,000.00	
		<u>\$509,502.56</u>
Capital stock	124,375.00	
Surplus	319,158.52	
Deferred non-interest bearing liabilities.....	43,107.23	
		<u>\$996,143.31</u>
Total		\$996,143.31

INVESTMENTS.

Nature of Investment.	Par value.	Actual cost.	Carried on books at.	Income accrued respondent during year.
Dominion Messenger and Signal Co.....	\$12,500.00	\$12,500.00	\$12,500.00	\$1,425.00
Toronto Hotel Co.....	1,500.00	1,500.00	1.00	.....
Total			<u>\$12,501.00</u>	<u>\$1,425.00</u>

INCOME ACCOUNT.

Telegraph and cable revenue:		
Revenue from transmission—telegraph—		
Commercial telegraph tolls.....	\$830,079.89	
Telegraph tolls on cable messages.....	93,590.28	
Miscellaneous transmission revenue—telegraph	215,712.59	
		<u>\$1,139,382.76</u>
Total operating revenue.....		\$1,139,382.76
Operating expenses:		
Maintenance expenses—		
Repairs of wire plant }		
Repairs of equipment }	\$179,995.80	
Repairs of buildings and grounds.....	3,593.42	
		<u>\$183,589.22</u>
Total		\$183,589.22

Conducting operations—telegraph and cable—		
Pay of managers, operators and attendants	\$563,234.56	
Office supplies and expenses.....	96,106.49	
Miscellaneous	14,469.21	
Total	\$673,810.26	
General administration—		
General office salaries	\$43,472.20	
General office supplies and expenses....	4,092.26	
General law expenses	1,695.80	
Accidents and damages.....	2,838.49	
Miscellaneous general expenses.....	16,388.05	
Total	\$68,486.80	
Insurance	1,844.30	
Total operating expenses.....	\$927,730.58	
Taxes	19,228.68	
Uncollectible bills	1,005.30	
Total revenue deductions.....		\$947,964.56
Gross operating income.....		\$191,418.20
Non-operating revenue:		
Rent from leased wires.....	\$75,430.95	
Rents from other operated property.....	11,827.72	
Contract revenue	153.24	
Income from investments.....	1,425.00	
Miscellaneous	24,710.47	
Total non-operating revenues.....		113,547.38
Gross income		\$304,965.58
Deductions from gross income:		
Interest on leased lines.....	\$229,545.60	
Amortization	7,285.92	
Total deductions from gross income.....		236,831.52
Net income		\$68,134.06
Surplus at beginning of year.....		249,065.56
Total surplus		\$317,199.62
Net adjustments during year.....		1,958.90
Surplus at close of year.....		\$319,158.52

THE MONTREAL TELEGRAPH COMPANY.

(Non-operating company.)

LOCATION OF OFFICE.

6 St. Sacrament Street, Montreal, Que.

PRINCIPAL OFFICERS.

President, William McMaster; Treasurer, D. Ross-Ross, Montreal, Que.

DIRECTORS.

William McMaster, William R. Miller, Bartlett McLennan, R. MacD. Paterson, Montreal, Que.

HISTORY.

Incorporated July, 1847, by special act of the Legislature of Canada. The company's property referred to in this statement is operated and maintained by the Great North Western Telegraph Company of Canada. Its operation, maintenance, and dividends are also guaranteed by the Western Union Telegraph Company of New York.

CAPITAL STOCK.

Common, authorized and outstanding:	
50,000 shares, par value \$40 each, total.....	\$2,000,000.00
Dividends declared during year, 8%.....	160,000.00

BALANCE SHEET.

Assets.

Cash, accounts receivable, bonds and other securities.....	\$160,346.13
Telegraph lines in Canada and the United States.....	1,625,890.00
Telegraph cables in Canada and the United States.....	33,487.39
Telegraph offices and equipment of offices in Canada and United States	212,500.00
Real estate in Montreal, Quebec, Ottawa and Toronto.....	279,946.40
Total	<u>\$2,312,169.98</u>

Liabilities.

Current liabilities:	
Dividend No. 200, payable July 15, 1914..	\$40,000.00
Unclaimed dividends, etc.....	3,492.80
	<u>\$43,492.80</u>
Contingent fund	116,853.33
Capital stock	2,000,000.00
Surplus	151,823.85
Total	<u>\$2,312,169.98</u>

INCOME ACCOUNT.

Non-operating revenues:	
Rents from leased wires and other property.....	\$165,000.00
Non-operating expenses:	
General administration—	
Office salaries, office supplies and expenses, and law expenses	5,000.00
	<u>\$160,000.00</u>
Net income	151,823.85
Surplus at beginning of year.....	<u>\$311,823.85</u>
Total surplus	160,000.00
Dividends	<u>\$151,823.85</u>
Surplus at close of year.....	

POSTAL TELEGRAPH CABLE COMPANY.

LOCATION OF OFFICE.

Hartford, Conn.

PRINCIPAL OFFICERS.

President, R. P. Martin, Hartford, Conn.; Vice-Presidents, Edward Reynolds, C. C. Adams, C. P. Bruch, and E. C. Platt, New York, N. Y.; Secretary, O. Kroher, Hartford, Conn.; Treasurer, E. C. Platt; Assistant Treasurer, Joseph J. Cardona; Assistant Secretary, William B. Dunn; Auditor, Felix J. Kernan, New York, N. Y.

DIRECTORS.

C. H. Mackay, Edward Reynolds, C. C. Adams, C. P. Bruch, E. C. Platt, Joseph J. Cardona, New York, N. Y.; N. C. Hall, New Haven, Conn.; R. P. Martin; O. Kroher, Hartford, Conn.

HISTORY.

Incorporated March 20, 1884, under special law of the State of Connecticut.

CAPITAL STOCK.

Common, authorized and outstanding:
 300 shares, par value..... \$30,000.00
 Dividends declared during year, none.
 Number of stockholders, 10; none in New Hampshire.

BALANCE SHEET.

Assets.

Plant	\$30,000.00
Construction and new equipment.....	3,996,327.84
Cash in bank.....	17,670.62
Balance due from agents.....	10,682.90
Accounts receivable	960,354.58
Supplies on hand.....	1,204.60
Total	\$5,016,240.54

Liabilities.

Capital stock	\$30,000.00
Bills and accounts payable.....	4,963,410.79
Surplus	22,829.75
Total	\$5,016,240.54

INCOME ACCOUNT.

Operating revenues:	
Telegraph and cable revenue—	
Revenue from transmission—telegraph—	
Commercial telegraph tolls.....	\$194,445.52
Telegraph tolls on cable messages....	1,860.54
Miscellaneous transmission revenue...	6,084.02
Total	\$202,390.08
Operating expenses:	
Maintenance—	
Supervision of maintenance.....	\$1,253.47
Repairs of wire plant.....	66,010.16
Repairs of equipment.....	2,933.75
Total	\$70,197.38
Conducting operations—	
Supervision of operations.....	\$27,617.37
Pay of managers, operators and attendants	109,295.00
Office supplies and expenses.....	31,941.31
Miscellaneous	39,303.19
Total	\$208,156.87
General administration—	
General office salaries, supplies and expenses	\$3,597.66
General law expenses.....	237.86
Accidents and damages.....	712.55
Law expenses connected with accidents and damages	60.00
Miscellaneous general expenses.....	137.79
Total	\$4,745.86
Total operating expenses.....	\$283,100.11

Taxes	3,501.76	
Uncollectible bills	397.98	
		<hr/>
Total revenue deductions.....		\$286,999.85
		<hr/>
Gross operating loss		\$84,609.77
Non-operating revenue:		
Rent from leased wires.....	\$49,232.84	
Messenger service	7,723.53	
Interest	481.49	
		<hr/>
Total		57,437.86
		<hr/>
Net loss		\$27,171.91
Surplus at beginning of year.....		50,634.16
		<hr/>
Total surplus		\$23,462.25
Net adjustments during year.....		632.50
		<hr/>
Surplus at close of year.....		\$22,829.75

RECEIPTS AND EXPENSES IN NEW HAMPSHIRE.

Receipts.

Commercial telegraph tolls interstate	\$6,320.45
Commercial telegraph tolls intrastate	96.18
Stock and commercial news.....	462.43
Money transfer tolls.....	533.78
Messenger service	98.98
Telegraph tolls on cable messages.....	71.63
Rents for leased wires.....	1,303.49
	<hr/>
Total	\$8,886.94

Expenses.

Wages	\$4,294.47
Messenger service expenses.....	1,203.06
Telephone service	283.37
Rents of telegraph offices.....	1,251.96
Miscellaneous expenses	184.64
Stationery and printing.....	292.40
Repairs of office equipment.....	92.57
Operating power	70.00
Repairs of aerial plant.....	1,761.28
Superintendence	415.24
General office expense.....	152.30
	<hr/>
Total	\$10,001.29

POLE AND WIRE MILEAGE IN NEW HAMPSHIRE.

Miles of poles	98
Miles of iron wire	485

THE WESTERN UNION TELEGRAPH COMPANY.

LOCATION OF OFFICES.

195 Broadway, New York City.

PRINCIPAL OFFICERS.

President, Newcomb Carlton; Vice-President, G. W. E. Atkins; Second Vice-President, B. Brooks; Treasurer, A. R. Brewer; Comptroller, E. Y. Gal-
laher; Secretary, William H. Baker; General Manager, New Hampshire, A.
G. Saylor, 195 Broadway, New York City.

DIRECTORS.

Oliver Ames, Boston, Mass.; William Vincent Astor, New York City; Henry A. Bishop, Bridgeport, Conn.; Newcomb Carlton, Robert C. Clowry, Henry P. Davison, Henry W. DeForest, Chauncey M. Depew, William Fahnestock, Edwin Gould, George J. Gould, Thomas H. Hubbard, Robert S. Lovett, Edwin G. Merrill, Percy A. Rockefeller, Jacob H. Schiff, Mortimer L. Schiff, Joseph J. Slocum, James Stillman, William H. Truesdale, Albert H. Wiggin, New York City.

HISTORY.

Incorporated under the laws of the State of New York, chapter 265, Laws of 1848; chapter 98, Laws of 1851; chapter 471, Laws of 1853; chapter 568, Laws of 1870. Name changed by chapter 97, Laws of 1856.

CAPITAL STOCK.

Common, authorized, 1,000,000 shares; outstanding, 998,171 shares, par value.....	\$99,817,100.00
Par value held in treasury.....	30,341.00
Dividends declared during year.....	3,490,564.00
Number of stockholders, 13,200; number in New Hampshire, 210.	
Par value of capital stock held in New Hampshire.....	368,500.00

FUNDED DEBT.

Class of Bond or Obligation.	Term.	Par value authorized and out- standing.	Rate %	Interest. Accrued during year.	Paid during year.
Funding and real estate	1900-1950	\$20,000,000	4½	\$900,000	\$897,075.00
Collateral trust..	1888-1938	8,745,000*	5	437,250	435,750.00
Gold Stock Tel. Co.	1905-1915	500,000	4½	22,500	22,500.00
Mutual Union Tel. Co.	1911-1931	5,000,000†	5	92,850	92,600.00
Northwestern Tel. Co.	1904-1934	1,500,000	4½	67,500	67,151.25
Total		\$35,745,000		\$1,520,000	\$1,515,076.25

BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$1,569,334.70
Bills receivable (notes).....	4,026,587.81
Accounts receivable:	
From system corporations.....	479,917.72
From subscribers and agents.....	6,411,248.52
Miscellaneous accounts receivable.....	174,027.07
Interest and dividends receivable.....	262,904.58
Other current assets:	
Employees' working funds.....	470,799.74
Less reserve for doubtful accounts.....	973,467.83
	<hr/>
	\$12,421,352.31
Materials and supplies.....	2,143,159.43
Investments	14,810,288.82
Sinking funds	155,152.68
Special deposits	87,455.69
Fixed capital	142,102,557.79
Construction work in progress.....	2,252,850.26
Prepayments	109,033.35
Unextinguished discounts on securities.....	12,187.67
Suspense	66,757.74
Treasury stock	30,341.04
Treasury bonds	3,143,000.00
Total	<hr/>
	\$177,334,136.78

*Authorized, \$30,000,000.

†Held in treasury, \$3,143,000.

Liabilities.

Current liabilities:

Taxes accrued	\$423,771.72
Interest accrued on funded debt	421,600.00
Interest accrued on unfunded debt	2,916.66
Unearned revenue	67,695.87
Bills payable	500,000.00
Accounts payable:	
Accounts with system corporations.....	293,840.35
Audited vouchers and wages unpaid...	787,758.63
Subscribers' deposits	8,255.48
Miscellaneous accounts payable.....	1,319,397.92
Dividends payable	133,969.92
Matured rents unpaid.....	130,446.94
Matured interest unpaid.....	20,466.25
Unmatured dividends	1,219,953.45
Unmatured rents and miscellaneous.....	39,249.64

	\$5,369,322.83
Funded debt	35,745,000.00
Reserve for depreciation.....	5,107,413.09
Optional reserves	1,339,143.56
Capital stock of subsidiary companies.....	3,878,375.00
Capital stock	99,817,100.00
Surplus	9,744,616.50
Deferred liabilities	12,881,244.08
Other surplus reserved.....	3,451,921.72
Total	\$177,334,136.78

SINKING FUND.

For deferred non-interest bearing liabilities due in 1981..... \$155,152.68

Special deposits:

Deposits with cities.....	\$3,353.45
Deposits for meters.....	234.20
Other items	81,776.26

Total \$85,363.91

SUSPENSE.

Shop expense	\$3,834.22
Engineering expense	6,378.14
Plant supervision expense.....	7,819.40
House service expense.....	1,238.39
Floating equipment expense.....	171.78
Miscellaneous	47,315.81
Total	\$66,757.74

INVESTMENTS.

Name of Corporation.	Par value unpledged.	Valuation.	Interest and dividends.
Stocks—			
Adirondack, Lake George & Saratoga Tel. Co.....	\$55,050.00	\$18,550.00	\$825.75
American District Tel. Co. of N. J.....	7,740,212.50	3,871,931.65	311,808.00
Dominion Tel. Co. of Canada	288,300.00	311,364.00	17,009.70
Great North Western Tel. Co. of Canada.....	82,875.00	67,840.90	.....
International News Ticker Co.	25,000.00	6,757.40	.....
Martha's Vineyard Tel. Co.	5,000.00	2,650.00	1,750.00
Philadelphia Local Tel. Co.	50,000.00	50,000.00	3,000.00
Put-in-Bay Tel. Co.....	830.00	1,000.00	41.50
Stock Quotation Tel. Co...	500,000.00	550,000.00	37,500.00
Not leased	\$8,747,267.50	\$4,880,093.95	\$371,934.95

American Tel. & Cable Co.	\$1,841,800.00	\$1,173,197.45	.....
Anglo-American Tel. Co....	6,369.96	3,630.88	\$224.91
Gold & Stock Tel. Co.....	2,555,600.00	2,683,380.00	.....
International Ocean Tel. Co.	1,984,600.00	1,982,475.69	.....
International Tel. Co. of Maine	90,100.00	33,669.00	.....
Operated under term leases	\$6,478,469.96	\$5,876,353.02	\$224.91
A. T. & T. notes held as investment	\$4,000,000.00	\$4,000,000.00	\$180,000.00
American Speaking Tel. Co.....		\$1.00	.....
American Products Co.....		90.00	.....
Brothers Valley Coal Co. (Common).....		212.89	.....
Brothers Valley Coal Co. (Pref.).....		21.29	.....
Camp & Hinton Co.....		660.30	.....
Case Crane Eng. Co.....		65.48	.....
Central Bank of Eureka Springs.....		129.94	.....
Consolidated Tel. Co.....		57.41	.....
Chamber of Commerce (Portland, Ore.)...		1.00	.....
Chamber of Commerce Realty Co.....		500.00	.....
Chicago Title & Trust Co.....		144.20	.....
Cleveland Athletic Asso.....		100.00	.....
Detroit Rock Salt Co.....		150.00	.....
First-Second Nat'l Bank of Pittsburg.....		6,375.00	.....
Miami Tel. Co.....		34.00	.....
H. Marquardt & Co.....		353.63	.....
Philadelphia Bourse (Common).....		90.00	\$15.00
Philadelphia Bourse (Pref.).....		75.00	.....
Southern Iron & Steel Co.....		20.00	.....
Savannah Cotton Exchange.....		100.00	.....
United States Rail Co.....		232.00	69.53
United Button Stock, tr. Certf.....		10.02	.....
S. T. Williams Staff Inc.....		290.14	.....
West Helena Consolidated Co.....		475.00	.....
Westinghouse Elec. Mfg. Co.....			300.00
Total		\$10,188.30	\$384.53
Bonds—			
Alaska Consolidated Mines Co.....			\$15.00
Bureau National Literature Tract Script..		\$4.25	.26
Income Prop. Co. of Col.....		400.00	20.00
Kansas City Northwestern R. R. Co.....		10.63	.....
N. Y. Times Pub. Co.....		42,000.00	2,520.00
Pillsbury & Washburn Co.....			10.00
Southern Iron & Steel Co.....		58.00	.....
State of Colorado Funding Bonds.....			7.50
United Button 5% Income Bond.....		10.02	.....
Total stocks and bonds.....		\$52,663.20	.....
Add special reserve debit.....		1,178.65	.....
Total		\$53,841.85	.....
Western Union Treasury stock.....		30,341.04	\$454.50
Grand total		\$84,182.89	\$3,411.79

INCOME ACCOUNT.

Operating revenues	\$45,528,395.40	
Operating expenses	36,685,576.96	
Net operating revenue.....		\$8,842,818.44
Taxes assignable to operations.....		1,185,000.00
Total operating income.....		\$7,657,818.44
Non-operating revenues		1,070,831.62
Total gross income.....		\$8,728,650.06

Deductions from gross income:

Other interest	\$4,026.37
Interest W. U. bonds.....	1,337,250.00
Other deductions	3,684,819.60

Total deductions from gross income..... \$5,026,095.97

Balance, net income..... \$3,702,554.09

Disposition of net income dividends..... 3,490,564.00

Income balance transferred to credit of surplus..... \$211,990.09

DETAILED REVENUES AND EXPENSES.**Operating revenues:**

Press cable tolls.....	\$2,520,810.05
Commercial cable tolls.....	2,412,202.04
Revenue from transmission.....	37,739,307.19
Election returns	5,475.05
Money order premiums.....	219,440.74
Time service receipts.....	349,527.19
Rents for opr. prop.....	290,228.63
Messenger service	547,839.38
Miscellaneous	55,485.62
Rents from leased wires.....	1,388,079.51

Total operating revenues..... \$45,528,395.40

Operating expenses:

Salaries and wages (land lines).....	\$8,917,363.36
Messenger service (land lines).....	1,452,648.45
Other expenses (land lines).....	4,260,633.94
Conducting operations (cable).....	681,472.54
General expenses (cable).....	133,738.25

\$15,445,856.54

Maintenance and depreciation (land lines) 3,735,000.00

Maintenance and depreciation (cables).. 228,537.20

Total \$19,409,393.74

Conducting operations (land lines)..... \$11,946,819.01

General and miscellaneous (land lines).. 741,012.02

Uncollectible operating revenue (land lines) 185,966.07

Conducting operations (cable)..... 745,290.78

General and miscellaneous (cable)..... 83,230.25

Uncollectible operating revenue (cable).. 2,100.00

Total \$13,704,418.13

Maintenance and depreciation (land lines) 3,305,902.77

Maintenance and depreciation (cables).. 265,862.32

Total 17,276,183.22

Total operating expenses..... \$36,685,576.96

PART VIII.

REPORTS OF TELEPHONE UTILITIES,

For The Year Ending June 30, 1914.

AMMONOOSUC TELEPHONE COMPANY.

STARK, N. H.

PRINCIPAL OFFICERS.

President, C. A. Cole; Clerk, H. R. Girard, Percy, N. H.; Treasurer and General Manager, Paul R. Cole, Groveton, N. H.; Auditor, H. R. Girard, Percy, N. H.

DIRECTORS.

Frank L. Blake, Stark, N. H.; H. R. Girard; C. A. Cole, Percy, N. H.

HISTORY.

Incorporated December 15, 1903, under the general laws of the State of New Hampshire.

LOCALITIES SERVED.

West Milan, Crystal, Percy, Stark and Groveton.

CAPITAL STOCK.

Common, authorized and outstanding:	
15 shares, par value \$75 each, total.....	\$1,125.00
Dividends declared during year, none.	
Number of stockholders, 1; in New Hampshire, 1.	
Total par value of stock held in New Hampshire.....	1,125.00

BALANCE SHEET.

Assets.

Cash	\$224.31	
Accounts receivable	100.93	
		\$325.24
Fixed capital		1,125.00
Total		\$1,450.24

Liabilities.

Accounts payable	\$101.70
Capital stock	1,125.00
Surplus	223.54
Total	\$1,450.24

FIXED CAPITAL.

Exchange lines:	
Pole lines	\$360.00
Aerial wire	320.00
Labor charges during construction.....	445.00
Total cost of fixed capital.....	\$1,125.00

INCOME ACCOUNT.

Operating revenues:	
Subscribers' stations	\$377.00

Operating expenses:		
Maintenance	\$76.90	
Rentals	195.00	
General office salaries.....	25.00	
Total operating expenses.....	\$296.90	
Taxes	19.20	
Total revenue deductions.....		\$316.10
Net income		\$60.90
Surplus at beginning of year.....		162.64
Total surplus at close of year.....		\$223.54

WIRE PLANT AND SERVICE DATA.

Metallic circuits; miles of poles, 20; miles of iron wire, 44.
 Number of subscribers, 25.

ANNETT TELEPHONE LINE.

EAST JAFFREY, N. H.

PARTNERS.

Albert Annett, Asahel S. Annett, East Jaffrey, N. H.; Arthur S. Annett, Washington, D. C.; Cecil B. Annett, New York, N. Y.; Mary H. Annett, Marietta Annett, East Jaffrey, N. H.

LOCALITIES SERVED.

Jaffrey and Rindge.

BALANCE SHEET.

Assets.

Cost of plant.....	\$500.00
Items receivable	15.00
Materials and supplies.....	18.75
Loss	8.46
Total	\$542.21

Liabilities.

Investment	\$518.75
Items payable	23.46
Total	\$542.21

INCOME ACCOUNT.

Operating revenues	\$127.12
Operating expenses:	
Labor expense	\$24.00
Materials and other expense.....	47.18
Taxes	8.00
Total operating expenses.....	79.18
Net earnings	\$47.94
Payment N. E. Tel. & Tel. Co. for exchange.....	56.40
Loss for year.....	\$8.46

SERVICE DATA.

Business subscribers, 2; residence subscribers, 8.
Rural or farm subscribers, 8.

CENTRAL OFFICE AND WIRE PLANT DATA.

Connected with N. E. Tel. & Tel. Co.
Wire plant:
Metallic circuits.
Miles of poles, 3; miles of iron wire, 12.

BARRINGTON & STRAFFORD TELEPHONE COMPANY.

STRAFFORD CORNER, N. H.

PRINCIPAL OFFICERS.

President, Charles F. Felker; Vice-President, Levi Howard; Clerk, Frank E. Scruton; Treasurer, Dana R. Berry; General Manager, Everitt W. Reed, Rochester, N. H.

HISTORY.

Incorporated January 17, 1910, under the general laws of the State of New Hampshire.

LOCALITIES SERVED.

A part of Barrington and Strafford. Farmers' line. Connected by switch at Strafford Corner with New England Telephone & Telegraph Company.

FIXED CAPITAL.

Investment in line.....	\$250.00
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INCOME ACCOUNT.

Income:	
From assessment	\$4.80
Expenses:	
Taxes	4.80
Surplus at close of year.....

WIRE PLANT AND SERVICE DATA.

Wire plant:
Metallic circuits.
Miles of poles, 5; miles of iron wire, 5.
Service:
Rural or farm line subscribers, 31.

BRADFORD TELEPHONE & TELEGRAPH COMPANY.

BRADFORD, VT.

PARTNERS.

John B. Hay and F. W. Walbridge, Bradford, Vt.

LOCALITIES SERVED.

Bradford, Fairlee, Newbury and Corinth, Vermont; Orford, Piermont and Haverhill, New Hampshire.

BALANCE SHEET.

Assets.

Cost of plant.....	\$6,000.00
Cash	100.00
Items receivable	100.00
Materials and supplies.....	200.00
Total	<u>\$6,400.00</u>

Liabilities.

Investment	\$6,000.00
Profit	400.00
Total	<u>\$6,400.00</u>

INCOME ACCOUNT.

Operating revenues	\$1,400.00
Operating expenses:	
Labor expense	\$617.00
Materials and other expense.....	100.00
Taxes	83.00
Total operating expenses.....	<u>800.00</u>
Net earnings	<u>\$600.00</u>

METER AND SERVICE DATA.

Wire plant:

Metallic circuits.

Miles of poles, 30 in Vermont; 6 in New Hampshire.

Miles of iron wire, 175 in Vermont; 25 in New Hampshire.

Feet of cable, 500 feet in Vermont.

Service:

City or village, 140; residence, 180; total, 220.

CENTRAL OFFICE DATA.

Number of central offices, 2.

Character of switchboard used, magneto.

Number of lines connected at each switchboard, 50 rural.

Capacity in number of lines of each switchboard: Bradford, 100; Newbury, 50.

CONNECTING LINES.

Names of connecting lines: Eastern Vermont, West Newbury, Lake Morey, Wrights Mountain, Newbury Center, South Ryegate Tel. Co.

CANTERBURY & BOSCAWEN TELEPHONE COMPANY.

CANTERBURY, N. H.

PRINCIPAL OFFICERS.

President, Lowell T. Mason; Vice-President, A. H. Brown; Clerk, Fred H. Brown, Canterbury, N. H.; Treasurer, Louis D. Morrill; Auditors, Fred H. Blanchard and S. K. Boyce, Penacook, N. H.; General Manager, Howard S. Chute, Canterbury, N. H.

DIRECTORS.

Lowell T. Mason, Milo S. Morrill, Sam W. Lake, Canterbury, N. H.; Charles G. Blanchard, Concord, N. H.; Fred H. Blanchard, Penacook, N. H.; W. H. Mitchell, Loudon, N. H.

HISTORY.

Incorporated February 7, 1905, under the general laws of the State of New Hampshire. Amended July 13, 1909.

LOCALITIES SERVED.

Canterbury, Boscawen, Loudon, Northfield, and Ward 1, Concord.

CAPITAL STOCK.

Common, authorized 200 shares, par value, \$25 each; out- standing 161 shares, par value.....	\$4,025.00
Dividends declared and paid during year, 6%.....	241.50
Number of stockholders, 89; number in New Hampshire, 86.	

BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$798.88	
Accounts receivable:		
From subscribers and agents.....	209.40	
		\$1,008.28
Materials and supplies.....		315.00
Fixed capital		9,694.73
Total		\$11,018.01

Liabilities.

Current liabilities:		
Interest accrued on unfunded debt.....	\$150.85	
Bills payable	2,730.00	
Subscribers' deposits	85.50	
Miscellaneous accounts payable.....	50.00	
		\$3,016.35
Capital stock		5,000.00
Surplus		3,001.66
Total		\$11,018.01

FIXED CAPITAL.

Central office equipment.....	\$225.18
Subscribers' station equipment.....	2,567.42
Exchange lines:	
Pole lines	4,327.41
Aerial wire	2,047.12
Office furniture and fixtures.....	452.60
Tools and vehicles.....	75.00
Total	\$9,694.73

INCOME ACCOUNT.

Operating revenues:		
Exchange—		
Subscribers' stations	\$2,196.54	
Toll	33.12	
Total operating revenues.....		\$2,229.66
Operating expenses:		
Maintenance—		
Supervision	\$2.00	
Repair of equipment.....	351.21	
Repairs of wire plant.....	139.89	
Miscellaneous	7.03	
Station removals and changes.....	134.48	
Total—maintenance		\$634.61
Traffic—		
Operators' wages	\$338.00	
Lease of Colby line.....	15.00	
		\$353.00
Commercial—		
Collection expenses	\$169.22	
Directory expenses	7.50	
		\$176.72
General administration—		
General office salaries	\$38.00	
General office supplies.....	39.87	
Miscellaneous	3.30	
Total—general administration		\$81.17
Total operating expenses.....	\$1,245.50	
Taxes	80.00	
Total revenue deductions.....		1,325.50
Gross operating income.....		\$904.16
Net non-operating revenue.....		10.65
Gross income		\$914.81
Deductions from gross income:		
Interest on unfunded debt.....		145.98
Net income		\$768.83
Surplus at beginning of year.....		2,663.56
Total surplus		\$3,432.39
Net adjustments during year.....		189.23
Adjusted balance		\$3,243.16
Dividends		241.50
Surplus at close of year.....		\$3,001.66

WIRE PLANT AND SERVICE DATA.

	Beginning of year.	Added during year.	Discontinued during year.	Close of year.
Wire plant:				
Miles of poles installed....	48 ½	2	..	50 ½
Miles of iron wire installed	202	5 ½	..	207 ½
Character of service and num- ber of subscribers:				
Pay stations	8	..	..	8
Rural stations	141	35	28	148
Extension stations	3	..	1	2
Total	152	35	29	158

CHESTER & DERRY TELEGRAPH & TELEPHONE CO.

CHESTER, N. H.

PRINCIPAL OFFICERS.

President, Cyrus F. Marston; Vice-President, Samuel E. Ray; Clerk, Walter P. Tenney; Treasurer, Arthur H. Wilcomb; Auditor, William N. Colby; General Manager, Arthur H. Wilcomb; Superintendent, Cyrus F. Marston, Chester, N. H.

DIRECTORS.

Cyrus F. Marston, Samuel E. Ray, Arthur H. Wilcomb, Walter P. Tenney, James A. Edwards, Chester, N. H.

HISTORY.

Incorporated June 26, 1877, under special law of the State of New Hampshire. Reorganized as Chester & Derry Telegraph & Telephone Co., July 9, 1904.

LOCALITY SERVED.

Chester.

CAPITAL STOCK.

Common, authorized and outstanding:
 150 shares, par value \$10 each, total..... \$1,500.00
 Dividends declared during year, none.
 Number of stockholders, 67, all in New Hampshire.

BALANCE SHEET.

Assets.

Cash	\$36.48	
Accounts receivable	66.25	
		\$102.73
Materials and supplies.....		16.30
Fixed capital		1,853.80
Reacquired securities		400.00
Total		\$2,372.83

Liabilities.

Taxes accrued	\$10.40	
Accounts payable	38.40	
Miscellaneous accounts payable.....	35.40	
		\$84.20
Reserve for depreciation.....		264.28
Capital stock		1,500.00
Surplus		524.35
Total		\$2,372.83

FIXED CAPITAL.

Central office equipment.....	\$45.00
Subscribers' station equipment.....	410.00
Exchange lines:	
Pole lines and aerial wire.....	1,373.80
Tools and vehicles.....	25.00
Total	\$1,853.80

INCOME ACCOUNT.

Operating revenues:

Exchange—		
Subscribers' stations	\$560.45	
Public pay stations.....	24.00	
Private lines	54.00	
Total		\$638.45
Toll—		
Company intrastate tolls.....	\$57.40	
Attachments and rentals.....	15.00	
Total		72.40
Total operating revenues.....		<u>\$710.85</u>

Operating expenses:

Maintenance—		
Repairs of wire plant	\$109.86	
Repairs of equipment	32.50	
Depreciation of plant and equipment....	50.25	
Other maintenance expenses.....	110.28	
Repairs charged to reserves.....	65.00	
Total	\$367.89	
Traffic—		
Operators' wages	\$215.00	
Central office supplies and expenses....	31.00	
Pay station expenses.....	15.00	
Total	\$261.00	
Commercial—		
Collection expenses	\$6.80	
Directory expenses	2.77	
Total	\$9.57	
Conducting operations—		
Office supplies and expenses.....	\$23.00	
Total operating expenses.....	\$661.46	
Taxes	16.00	
Uncollectible bills	64.60	
Interest on unfunded debt.....	5.70	
Total deductions		<u>747.76</u>
Net loss		<u>\$36.91</u>
Surplus at beginning of year.....		561.26
Surplus at close of year.....		<u>\$524.35</u>

WIRE PLANT AND SERVICE DATA.

Wire plant:

Metallic circuits.
Miles of poles, 15; miles of iron wire, 30.

Service:

Subscribers, city, three-party residence.....	3
Pay stations	4
Rural or farm line.....	68
Total	<u>75</u>

CHICHESTER TELEPHONE COMPANY.

CHICHESTER, N. H.

PRINCIPAL OFFICERS.

President and Superintendent, F. B. Shaw; vice-president, J. L. T. Shaw; Clerk, C. A. Langmaid; Treasurer, W. L. Langmaid; Auditors, P. LeClair Towle and A. L. West, Chichester, N. H.

DIRECTORS.

E. J. Lake, G. W. Lake, A. S. Dame, S. C. Marden, C. A. Langmaid, F. B. Shaw, Chichester, N. H.

HISTORY.

Incorporated June 3, 1905, under the general laws of the State of New Hampshire. Amended April 6, 1906.

LOCALITIES SERVED.

Chichester, Loudon and Epsom.

CAPITAL STOCK.

Common, authorized and outstanding:	
84 shares, par value \$25 each, total.....	\$2,100.00
Dividends declared and paid during year, 6%.....	126.00
Number of stockholders, 17; all in New Hampshire.	

BALANCE SHEET.

Assets.

Cash	\$521.43
Fixed capital	2,944.24
Total	\$3,465.67

Liabilities.

Accounts payable	\$50.00
Reserve for depreciation	612.17
Capital stock	2,100.00
Surplus	703.50
Total	\$3,465.67

INCOME ACCOUNT.

Operating revenues	\$1,248.76
Operating expenses	\$1,047.23
Taxes	48.00
Total revenue deductions	\$1,095.23
Net income	\$153.53
Surplus at beginning of year.....	675.97
Total surplus	\$829.50
Dividends	126.00
Surplus at close of year.....	\$703.50

WIRE PLANT AND SERVICE DATA.

	Beginning of year.	Added during year.	Discontinued during year.	Close of year.
Wire plant:				
Metallic circuits:				
Miles of poles.....	24	3 1/4	..	27 1/4
Miles of iron wire.....	40	7 1/2	..	47 1/2
Service:				
Rural—subscribers	66	5	2	69

CITIZENS TELEPHONE COMPANY.

LACONIA, N. H.

PRINCIPAL OFFICERS.

President, A. W. Abbott; Secretary, E. H. Shannon, Laconia, N. H.; Treasurer, S. B. Cole, Lakeport, N. H.; Auditor, J. W. Ashman; General Manager, W. B. Johnson, Laconia, N. H.

DIRECTORS.

J. W. Ashman, A. W. Abbott, True E. Prescott, Laconia, N. H.; J. H. Dow, V. E. Haserick, Lakeport, N. H.; C. H. Odell, Sanbornton, N. H.; W. P. Odell, Brookline, Mass.; James Aiken, Franklin, N. H.

HISTORY.

Incorporated July 21, 1896, under the general laws of the State of New Hampshire. Amended January 18, 1899; June 21, 1900; June 14, 1902; October 18, 1902, and July 18, 1903.

LOCALITIES SERVED.

Laconia, Tilton, Franklin, Meredith, Belmont, Bristol, Gilford, Canterbury, New Hampton, and Hill.

CAPITAL STOCK.

Common, authorized and outstanding:	
4,000 shares, par value \$25 each, total.....	\$100,000.00
Dividends declared during year, 4%.....	4,000.00

BALANCE SHEET.

<i>Assets.</i>	
Cash and current assets:	
Cash	\$2,114.07
Accounts receivable	2,600.00
	<hr/>
	\$4,714.07
Materials and supplies	280.00
Fixed capital	120,855.86
	<hr/>
Total	\$125,849.93

<i>Liabilities.</i>	
Current liabilities:	
Bills payable (notes).....	\$2,000.00
Dividends payable	2,000.00
	<hr/>
	4,000.00
Capital stock	100,000.00
Surplus	21,849.93
	<hr/>
Total	\$125,849.93

FIXED CAPITAL.

Intangible capital	\$2,256.38
Central office equipment.....	6,113.56
Subscribers' station equipment.....	29,852.58
Exchange lines:	
Pole lines	45,194.52
Aerial wire	18,265.40
Aerial cable	13,318.00
Underground conduit	689.65
Submarine cable	1,650.00
Right of way.....	186.00
Office furniture and fixtures.....	448.30
Tools and vehicles.....	140.00
Repair shop equipment	65.00
Additions and betterments.....	2,676.47
	<hr/>
Total cost of fixed capital.....	\$120,855.86

INCOME ACCOUNT.

Operating revenues:

Exchange—

Subscribers' stations	\$30,542.35
Public pay stations.....	15.75

Total operating revenues.....	\$30,558.10
Total toll line revenue.....	384.89

Total operating revenues	\$30,942.99
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Operating expenses:

Maintenance—

Repairs of wire plant.....	\$6,018.46
Repairs of equipment	1,230.51
Station removals and changes.....	401.00
Other maintenance expenses.....	1,701.32

Total maintenance	\$9,351.30
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Traffic—

Operators' wages	\$6,535.53
Central office supplies and expenses.....	189.57
Pay station expenses.....	6.00
Miscellaneous	1,460.59

Total—traffic	\$8,191.69
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Commercial—

Administration	\$480.00
Collection expenses	635.90
Miscellaneous	95.31

Total—commercial	\$1,211.21
------------------------	------------

General administration—

General office salaries	\$1,450.00
General office supplies and expenses....	10.00
General law expenses.....	183.51

Total—general administration	\$1,643.51
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Insurance	331.28
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Taxes	1,440.00
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Uncollectible bills, estimated.....	206.00
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Interest on unfunded debt.....	153.32
--------------------------------	--------

Total revenue deductions.....	22,528.31
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Net income	\$8,414.68
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Dividends, 4%	4,000.00
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Surplus for year	\$4,414.68
------------------------	------------

WIRE PLANT AND SERVICE DATA.

	Beginning of year.	Added during year.	Discontinued during year.	Close of year.
Wire plant—Metallic circuits:				
Miles of poles installed...	293	3	..	296
Miles of iron wire installed	1,771	7	..	1,778
Miles of copper wire in- stalled	102	6	..	108
Feet of cable installed....	40,656	..	..	40,656
Number of subscribers:				
City or village	1,435	88	118	1,405
Pay station	12	..	1	11
Rural	659	62	34	687
Total	2,106	..	..	2,103
Extension stations, all kinds	29	2	..	31

COLD RIVER TELEPHONE COMPANY.

CHATHAM, N. H.

PRINCIPAL OFFICERS.

President, John F. Charles; Vice-President, John L. Chandler; Clerk, Chester C. Eastman, Chatham, N. H.; Treasurer, Charles O. Barrows, Auditors, W. P. Emerson, Stowe, Me.; and J. L. Chandler, No. Chatham, N. H.; Superintendent, Chas. S. Chandler, Chatham, N. H.

DIRECTORS.

Charles S. Chandler, W. P. Chandler, N. Chatham, N. H.; W. P. Emerson, Stowe, Me.

HISTORY.

Incorporated April 16, 1907, under the general laws of the State of New Hampshire.

LOCALITIES SERVED.

Chatham, N. H.

CAPITAL STOCK.

Common, authorized and outstanding:	
33 shares, par value \$50 each, total.....	\$1,650.00
Held in treasury, 6 shares.	
Dividends declared and paid during year.....	478.44
Number of stockholders, 7; number in New Hampshire, 5.	
Par value of stock held in New Hampshire.....	250.00

BALANCE SHEET.

Assets.

Cost of plant.....	\$2,300.00
Materials and supplies.....	50.00
Total	<hr/> \$2,350.00

Liabilities.

Capital stock	\$1,650.00
Investment	700.00
Total	<hr/> \$2,350.00

INCOME ACCOUNT.

Operating revenues:		
Earnings from subscribers.....	\$732.00	
Other earnings	28.78	
Total operating revenues.....		<hr/> \$760.78
Operating expenses:		
Labor expense	\$57.05	
Materials and other expense.....	206.09	
Taxes	19.20	
Total operating expenses.....		<hr/> 282.34
Net earnings		<hr/> \$478.44
Dividends		<hr/> 478.44

WIRE PLANT AND SERVICE DATA.

Wire plant—grounded circuits.

Miles of poles, 23; miles of iron wire, 26.

Services:

City or village—

One party, business, 1.

One party, residence, 60.

Public pay stations, 5.

CONTOOCOOK VALLEY TELEPHONE COMPANY.

(G. W. Lincoln, Proprietor.)

Hillsboro, N. H.

LOCALITIES SERVED.

Hillsboro, Henniker, Antrim, Bennington and Deering, N. H.

BALANCE SHEET.

Assets.

Cost of plant.....	\$4,000.00
Cash	100.00
Items receivable	400.00
Total	<u>\$4,500.00</u>

Liabilities.

Capital stock	\$4,000.00
Items payable	500.00
Total	<u>\$4,500.00</u>

FIXED CAPITAL.

Central office equipment.....	\$500.00
Subscribers' station equipment.....	1,000.00
Exchange lines:	
Pole lines	3,000.00
Aerial wire	2,000.00
Aerial cable	500.00
Total	<u>\$7,000.00</u>

INCOME ACCOUNT.

Operating revenues:	
Earnings from subscribers.....	\$6,000.00
Other earnings	2,100.00
Total operating revenues.....	<u>\$8,100.00</u>
Operating expenses:	
Labor expense	\$3,550.00
Materials and other expense.....	1,450.00
Rental, N. E. Tel. & Tel. Co.....	950.00
Taxes	200.00
Total operating expenses.....	<u>6,150.00</u>
Net earnings	<u>\$1,950.00</u>

WIRE PLANT AND SERVICE DATA.

Wire plant:

Metallic circuits.

Miles of poles, 50; miles of iron wire, 300; miles of copper wire, 7.

Feet of cable, 300.

Service:

Village, 281; Rural, 82.

CENTRAL OFFICE DATA.

Number of central offices, 4.

Character of switchboards, magneto.

Ultimate capacity in number of lines of each switchboard: Henniker, 30;

Hillsboro, 200; Antrim, 60.

Average number of operator hours employed per day, 72.

COOS TELEPHONE COMPANY.

LANCASTER, N. H.

PRINCIPAL OFFICERS.

President, Fred W. Story, Boston, Mass.; Vice-President, John C. Hutchins, North Stratford, N. H.; Clerk, Merrill Shurtleff, Lancaster, N. H.; Treasurer, Edmund S. Willard; Auditor, Edmund W. Longley, Boston, Mass.; General Manager, W. A. Lewis, Lancaster, N. H.; Assistant Clerk, Carl F. A. Siedhof, Boston, Mass.

DIRECTORS.

John T. Amey, Lancaster, N. H.; George H. Dresser, Somerville, Mass.; Walter Drew, Colebrook, N. H.; William R. Driver, Jr., Milton, Mass.; Henry F. Green, Littleton, N. H.; John C. Hutchins, North Stratford, N. H.; Matt B. Jones, Newton, Mass.; Jasper N. Keller, Surry, N. H.; John B. Noyes, Berlin, N. H.; Fred W. Story, Laconia, N. H.; Lambert N. Whitney, Newton, Mass.

HISTORY.

Date of organization: May 20, 1907.

This company was organized under the general laws of the State of New Hampshire. Stock was issued June 1, 1907, in payment of plant of the Northern Tel. and Tel. Company, and the plant of the New England Tel. and Tel. Company, located at Bethlehem, Lisbon, Littleton and Whitefield, N. H. The first named company is not now doing business and keeps no accounts.

Stock was issued in 1910 in payment of plant of Essex and Coos Telephone Company located at Bloomfield, Brunswick, Canaan, Guildhall, Lemington and Maidstone, Vt., and at Clarksville, Colebrook, Jefferson, Lancaster, Northumberland, Pittsburg, Stewartstown and Whitefield, N. H.

In December, 1911, authority was given by the Public Service Commission of New Hampshire under Order No. 30 for the purchase of that portion of the plant and property formerly owned by the Woodsville Telephone Company, located in the town of Lisbon, the northerly portion of the town of Landaff, and in the town of Bath north of Bath postoffice village.

In June, 1912, authority was given by the Public Service Commission of New Hampshire, under Orders Nos. 71 and 72, for the purchase for cash of the plant and property of the Colebrook, Columbia and Errol Telephone Company, owned by J. H. Dudley, located in the towns of Clarksville, Colebrook, Columbia, Dixville, Errol, Millsfield, Pittsburg and Stewartstown.

LOCALITIES SERVED.

Bath, Berlin, Bethlehem, Carroll, Clarksville, Colebrook, Columbia, Dalton, Dartmouth College Grant, Dixville, Dummer, Errol, Gorham, Jefferson, Lancaster, Landaff, Lisbon, Littleton, Lyman, Milan, Millsfield, Northumberland, Pittsburg, Randolph, Shelburne, Stark, Stewartstown, Stratford, Wentworth's Location and Whitefield.

CAPITAL STOCK.

Common, authorized and outstanding:	
· 6,120 shares, par value \$25 each, total.....	\$153,000.00
Dividends declared during year, 7%.....	10,710.00
Number of stockholders, 34; number in New Hampshire, 25.	
Par value of stock held in New Hampshire.....	20,125.00

BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$1,846.58	
Accounts receivable:		
From system corporations.....	598.25	
From subscribers and agents.....	13,686.02	
Miscellaneous accounts receivable.....	2,562.26	
		\$18,693.11
Materials and supplies.....		16,063.51
Fixed capital		252,431.73
Prepayments		336.34
Total		\$287,524.69

Liabilities.

Current liabilities:		
Taxes accrued	\$1,504.27	
Unearned revenue	149.35	
Accounts payable:		
Accounts with system corporations.....	11,657.89	
Audited vouchers and wages unpaid....	285.05	
Bills payable	81,802.76	
		\$95,399.32
Reserve for depreciation.....		23,333.08
Optional reserves		1,531.10
Capital stock		153,000.00
Surplus		14,261.19
Total		\$287,524.69

INCOME ACCOUNT.

Operating revenues:		
Exchange—		
Subscribers' stations	\$63,777.12	
Public pay stations.....	407.96	
Miscellaneous exchange revenue.....	490.96	
Total		\$64,676.04
Toll—		
Message tolls	\$22,683.30	
Miscellaneous toll revenue.....	198.89	
Messenger service	46.30	
Telegraph commissions	173.99	
Other telegraph service charges.....	979.26	
Total		24,081.74
Total operating revenues.....		\$88,757.78
Operating expenses:		
Maintenance—		
Supervision of maintenance.....	\$1,032.09	
Repairs of wire plant	6,159.61	
Repairs of equipment	4,409.58	
Station removals and changes.....	1,201.99	
Depreciation of plant and equipment....	16,625.60	
Repairs charged to reserves.....	311.33	
Total		\$29,117.54

Traffic—		
Central office superintendence.....	\$407.86	
Operators' wages	16,693.76	
Central office supplies and expenses.....	2,228.82	
Pay station expenses.....	167.33	
Other traffic expenses.....	109.84	
Total	\$19,607.61	
Commercial—		
Commercial administration	\$1,270.31	
Promotion expenses	1,167.70	
Collection expenses	5,550.98	
Directory expenses	303.66	
Total	\$8,292.65	
General administration—		
General office salaries	\$2,581.55	
General office supplies and expenses....	990.38	
Rent for conduits, poles and other sup- ports	109.21	
Rent of instruments and equipment	2,619.17	
Rent of telephone offices	1,948.15	
Rent for lease of telephone plant.....	9.34	
General law expenses.....	8.03	
Accidents and damages.....	16.13	
Miscellaneous general expenses.....	2,144.44	
Relief department and pensions.....	463.75	
Total	\$10,890.15	
Insurance	759.99	
Total operating expenses.....	\$68,667.94	
Taxes	3,729.45	
Uncollectible bills	883.11	
Total revenue deductions.....		\$73,280.50
Gross operating income.....		\$15,477.28
Non-operating revenue		43.73
Gross income		\$15,521.01
Deductions from gross income:		
Interest on unfunded debt.....		4,586.39
Net income		10,934.62
Surplus at beginning of year.....		14,036.57
Total surplus		24,971.19
Dividends		10,710.00
Surplus at close of year.....		\$14,261.19

CENTRAL OFFICE DATA.

Exchange.	Lines Connected.				Ca- pacity stalled in-	Ul- timate capacity. ca-
	Local.	Rural.	Toll.	Total.		
Berlin, N. H.....	22	12	7	41	70	70
Bethlehem, N. H.....	19	4	7	30	40	100
Colebrook, N. H.....	7	5	4	16	20	20
Gorham, N. H.....	146	21	46	213	230	800
Groveton, N. H.....	41	11	9	61	110	200
Lancaster, N. H.....	104	9	19	132	240	800
Lisbon, N. H.....	16	7	7	30	60	200
Littleton, N. H.....	36	7	5	48	50	100
Milan, N. H.....	52	17	10	79	100	200
North Stratford, N. H.....	52	5	14	71	80	200
W. Stewartstown, N. H.....	275	...	19	294	440	800
Whitefield, N. H.....	43	9	12	64	80	200
	813	107	159	1,079	1,520	3,690

Character of switchboards, magneto.

WIRE PLANT AND SERVICE DATA.

(New Hampshire.)

	Beginning of year.	Added during year.	Discontinued during year.	Close of year.
Wire plant:				
Metallic circuits—				
Miles of poles installed	584	17.1	74	527.1
Miles of iron wire in- stalled	2,539	323.2	354.1	2,508.1
Miles of copper wire in- stalled	1,380	847.5	70.7	2,156.8
Feet of cable installed.	72,310	29,420	5,521	96,209
Service:				
City or village—				
One-party, business ...	112	738	547	127
One-party, residence ..	83			99
Two-party, business ..	166			197
Two-party, residence ..	199			240
Six-party or more, busi- ness	373			378
Six-party or more, resi- dence	1,029			1,124
Pay stations.....	96			111
Total local stations..	2,068			2,276
Rural—				
Rural or farm line, busi- ness	44	738	547	43
Rural or farm line, resi- dence	900			849
Total rural stations..	944			892
Total local and rural	3,012			3,168
Extension stations, all kinds	171			197
Private branch exchange stations	220			224
Official stations	16			21
Receiving stations	2			2
	3,421	738	547	3,612

CORNISH FLAT TELEPHONE COMPANY.

CORNISH FLAT, N. H.

PRINCIPAL OFFICERS.

President, Wm. H. Child; Vice-President, E. H. Gordon; Clerk, L. H. Harlow; Treasurer, Wm. H. Sisson; Auditor, Evarts P. Brown; Superintendent, Geo. C. Huggins, Cornish Flat, N. H.

DIRECTORS.

Evarts P. Brown, Wm. H. Sisson, M. B. Lindsay, Cornish Flat, N. H.

HISTORY.

Incorporated October 30, 1909, under the general laws of the State of New Hampshire.

LOCALITY SERVED.

Cornish.

BALANCE SHEET.

Assets.

Cost of plant	\$479.00
Cash	9.31
Items receivable	1.89
Total	<u>\$490.20</u>

Liabilities.

Capital stock	\$435.00
Profit	55.20
Total	<u>\$490.20</u>

INCOME ACCOUNT.

Operating revenues:	
Earnings from subscribers.....	\$7.20
Other earnings	48.00
Total earnings	<u>\$55.20</u>
Operating expenses:	
Labor expense	\$27.60
Materials and other expense.....	10.00
Taxes	6.40
Total operating expenses	<u>44.00</u>
Net earnings	\$11.20
Interest	25.74
Loss for year.....	<u>\$14.54</u>

WIRE PLANT AND SERVICE DATA.

Miles of poles, 2; miles of iron wire, 12.
 Number of subscribers, 16.

CONNECTING LINES.

Connect with Claremont Exchange.

DUNBARTON TELEPHONE COMPANY.

DUNBARTON, N. H.

PRINCIPAL OFFICERS.

President, Edward P. Paige; Vice-President, Walter Putney, Concord, N. H., Route 2; Clerk and Auditor, Frederick L. Ireland, Dunbarton, N. H.; Treasurer, Henry S. Whipple, Concord, N. H., Route 2; General Manager, John Bunten, Dunbarton, N. H.

DIRECTORS.

James E. Stone, Edward P. Paige, Charles F. M. Stark, George O. Bailey, Concord, N. H., Route 2; John T. Haines, Walter Putney, Concord, N. H.; David Story, Goffstown, N. H.

HISTORY.

Incorporated March 18, 1902, under the general laws of the State of New Hampshire. Amended April 7, 1903.

LOCALITIES SERVED.

Dunbarton, Bow, Hopkinton, Weare and Goffstown.

CAPITAL STOCK.

Common, authorized and outstanding:

72 shares, par value \$25 each, total.....	\$1,800.00
Dividends declared during year.....	167.50
Number of stockholders, 72; all in New Hampshire.	

BALANCE SHEET.

Assets.

Cash	\$79.78	
Accounts receivable	135.00	
		\$214.78
Fixed capital		3,438.40
Total		\$3,653.18

Liabilities.

Interest accrued on unfunded debt.....	\$50.00	
Bills payable (notes).....	200.00	
		\$250.00
Capital stock		1,800.00
Surplus		1,603.18
Total		\$3,653.18

INCOME ACCOUNT.

Operating revenues:		
Subscribers' stations	\$1,155.65	
Toll	165.11	
Total operating revenues		\$1,320.76
Operating expenses:		
Maintenance	\$210.36	
Traffic	365.00	
General administration	18.50	
Total operating expenses.....	\$593.86	
Taxes	28.80	
Total revenue deductions.....		622.66
Gross operating income.....		\$698.10
Dividends		167.50
Surplus for year.....		\$530.60

WIRE PLANT AND SERVICE DATA.

Wire plant:

Grounded circuits.

Miles of poles, 40; miles of iron wire, 120.

Service:

Number of subscribers, rural or farm line, 105.

ERROL HILL TELEPHONE COMPANY.

ERROL, N. H.

PRINCIPAL OFFICERS.

President, O. W. Grover; Secretary, A. C. Thurston; Treasurer, L. C. Bragg.

DIRECTORS.

O. W. Grover, A. C. Thurston, L. C. Bragg, I. C. Beecher, Errol, N. H.

HISTORY.

Date of organization: September 28, 1907.
No record of incorporation.

LOCALITIES SERVED.

Errol and Cambridge, New Hampshire, and Upton, Maine.

BALANCE SHEET.

Assets.

Cost of plant	\$600.00
Items receivable	39.57
Materials and supplies	8.00
Total	<hr/> \$647.57

Liabilities.

Investment	\$600.00
Items payable	45.01
Profit	2.56
Total	<hr/> \$647.57

INCOME ACCOUNT.

Operating revenues:	
Earnings from subscribers.....	\$31.50
Other earnings	7.34
Total operating revenues.....	<hr/> \$38.84
Operating expenses:	
Labor expense	\$3.00
Taxes	12.80
Total operating expenses.....	<hr/> 15.80
Net earnings	<hr/> \$23.04
Deductions	20.00
Profit for year	<hr/> \$3.04

SERVICE DATA.

Total rural or farm subscribers, 49.

CENTRAL OFFICE AND WIRE PLANT DATA.

Number of central offices in system: 1.
Character of switchboard: common lever switch.
Wire plant: grounded circuits.
Miles of poles, 13; miles of iron wire, 13.
Names of connecting lines: Androscoggin Lakes Tel. Co., Upton & Grafton Tel. Co.

ETNA TELEPHONE COMPANY.

ETNA, N. H.

PRINCIPAL OFFICERS.

President, M. C. Camp; Clerk and Treasurer, A. L. Camp; General Manager, F. V. Tuxbury, Etna, N. H.

DIRECTORS.

H. N. Camp, F. H. Camp, Etna, N. H.

HISTORY.

Partnership formed: May 1, 1911.

LOCALITIES SERVED.

Hanover and Lebanon.

BALANCE SHEET.

Assets.

Cash	\$10.68	
Accounts receivable	102.66	
		<hr/>
		\$113.34
Materials and supplies		34.93
Fixed capital		550.00
Deficit		429.07
		<hr/>
Total		\$1,127.34

Liabilities.

Bills payable (notes)	\$550.00	
Accounts payable	77.34	
		<hr/>
		\$627.34
Capital invested		500.00
		<hr/>
Total		\$1,127.34

INCOME ACCOUNT.

Operating revenues:		
Subscribers' stations		\$317.25
Public pay stations		21.50
Attachments and rentals		66.00
		<hr/>
Total operating revenues		\$404.75
Operating expenses:		
Maintenance—		
Supervision	\$56.05	
Miscellaneous	27.79	
Joint maintenance expenses	62.99	
		<hr/>
Total—maintenance	\$156.83	
Traffic—		
Operators' wages	\$200.00	
Central office supplies and expenses	8.25	
		<hr/>
Total traffic	\$208.25	

Total operating expenses.....	\$365.08	
Taxes	8.00	
Non-operating expenses:		
Interest on funded debt.....	27.50	
Total deductions from gross income.....		\$400.58
Net loss		\$4.17
Deficit at beginning of year.....		433.24
Deficit at close of year.....		\$437.41

WIRE PLANT AND SERVICE DATA.

Wire plant:

Grounded circuits.

Miles of poles, 15; miles of wire, iron, 22; copper, $\frac{1}{3}$.

Service:

Number of subscribers: village, 3; pay stations, 1; rural, 40, total, 44.

CENTRAL OFFICE DATA.

Number of central offices in operating system: 1.

Character of switchboard: Central.

Total number of lines connected at each switchboard: 7.

Ultimate capacity in number of lines of switchboard, 20.

Average number of operator hours employed per day: 14.

ETNA & HANOVER CENTER TELEPHONE COMPANY.

HANOVER CENTER, N. H.

PRINCIPAL OFFICERS.

President, J. Walter Ferson; Secretary and Treasurer, Mrs. Delia C. Fitts, Lyme Center, N. H.

DIRECTORS.

J. Walter Ferson, Lyme Center, N. H.; George N. LaBombard, Hanover Center, N. H.; H. L. Huntington, Etna, N. H.; C. H. Hurlbutt, Hanover Center, N. H.

HISTORY.

Incorporated September 3, 1904, under the general laws of the State of New Hampshire.

LOCALITIES SERVED.

Hanover (villages of Etna and Hanover Center). Lines also extend into the town of Lebanon.

BALANCE SHEET.

Assets.

Cost of plant.....	\$1,100.00
Cash	78.05
Total	\$1,178.05

Liabilities.

Capital stock	\$1,100.00
Profit	78.05
Total	\$1,178.05

INCOME ACCOUNT.

Operating revenues:		
Earnings from subscribers.....	\$312.96	
Other earnings	33.04	
	<hr/>	
Total operating revenues.....		\$346.00
Operating expenses:		
Labor expense	\$24.19	
Materials and other expense.....	270.26	
Taxes	8.62	
	<hr/>	
Total operating expenses.....		303.07
		<hr/>
Net earnings		\$42.93
Dividends		55.00
		<hr/>
Loss for year.....		\$12.07

WIRE PLANT AND SERVICE DATA.

Wire plant:
 Metallic circuits.
 Miles of poles, 9; miles of iron wire, 25.
 Service:
 Rural or farm subscribers, 25.

CENTRAL OFFICE DATA.

Character of switchboard: Switching done by Mascoma Valley Tel. Co. at
 Lebanon, N. H.

FAIRLEE TELEPHONE COMPANY.

FAIRLEE, VT.

PARTNERS.

J. Ralph Pierce and Charles E. Pierce, Fairlee, Vt.

HISTORY.

Partnership formed May 1, 1906.

LOCALITIES SERVED.

Fairlee and Thetford, Vt.; Orford and Lyme, N. H.

BALANCE SHEET.

Assets.

Cost of plant.....	\$10,942.86
Items receivable	442.95
Materials and supplies.....	15.85
	<hr/>
Total	\$11,401.66

Liabilities.

Investment	\$7,500.00
Items payable	52.18
Profit	3,849.48
	<hr/>
Total	\$11,401.66

INCOME ACCOUNT.

Operating revenues:		
Earnings from subscribers.....		\$4,160.00
Other earnings		220.60
Total operating revenues.....		<u>\$4,380.60</u>
Operating expenses:		
Labor expense	\$2,742.60	
Materials and other expense.....	816.00	
Taxes	116.65	
Total operating expenses.....		<u>3,675.25</u>
Net earnings		\$705.35
Interest		450.00
Profit for year.....		<u>\$255.35</u>

WIRE PLANT AND SERVICE DATA.

Wire plant:

All metallic circuits except three.

Miles of poles, 132; miles of iron wire, 264.

Service:

City or village business subscribers, 28; residence subscribers, 232.

CENTRAL OFFICE DATA.

Number of central offices, 2.

Character of switchboard: magneto.

Number of lines connected at each switchboard: Fairlee, 1 toll and 29 local; Lyme, 2 toll and 10 local.

Capacity in number of lines of each switchboard: Fairlee, 50; Lyme, 20.

FAIRLEE AND WENTWORTH TELEPHONE COMPANY.

WENTWORTH, N. H.

PRINCIPAL OFFICERS.

President, David Wilcox, Orford, N. H.; Clerk, Neal D. Johnson, Wentworth, N. H.; Treasurer, Julia A. Pease, Orford, N. H.

DIRECTORS.

A. L. Chase, Wentworth, N. H.; H. W. Stetson, C. M. Pease, Henry Pease, Orford, N. H.; S. Fraser, Wentworth, N. H.

HISTORY.

Incorporated January 10, 1905, under the general laws of the State of New Hampshire.

LOCALITIES SERVED.

Wentworth and Orford.

CAPITAL STOCK.

Common, authorized and outstanding:	
30 shares, par value \$20 each, total.....	\$600.00
Dividends declared during year, none.	
Number of stockholders, 19; all in New Hampshire.	

FAIRMOUNT TELEPHONE COMPANY.

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BALANCE SHEET.

Assets.

Cash	\$81.32
Fixed capital	600.00
Total	\$681.32

Liabilities.

Capital stock	\$600.00
Surplus	81.32
Total	\$681.32

INCOME ACCOUNT.

Revenues, all sources:		
Assessments		\$139.00
Expenses:		
Maintenance	\$105.84	
Taxes	8.09	
Total revenue deductions.....		113.93
Net income		25.07
Surplus at beginning of year.....		56.25
Surplus at close of year.....		\$81.32

WIRE PLANT AND SERVICE DATA.

Wire plant:
Metallic circuits.
Miles of poles, 15; miles of iron wire, 30.
Service:
Rural or farm line subscribers, 20.

FAIRMOUNT TELEPHONE COMPANY.

(A. J. Hamm, Owner.)

LEIGHTON'S CORNER, N. H.

Report for year ending March 31, 1914.

LOCALITIES SERVED.

Tuftonboro, Ossipee and Wakefield, N. H.; Newfield, Me.

BALANCE SHEET.

Assets.

Value of plant.....	\$300.00
Cash	1.04
Items receivable	104.10
Materials and supplies.....	16.00
Total	\$421.14

Liabilities.

Capital stock	\$300.00
Bad bills	22.24
Items payable	46.40
Allowance for depreciation.....	30.00
Profit	22.50
Total	\$421.14

INCOME ACCOUNT.

Operating revenues:	
Earnings from subscribers.....	\$255.00
Other earnings	67.93
Total operating revenues.....	\$322.93
Operating expenses:	
Labor expense	\$104.00
Materials and other expense.....	12.00
Taxes	8.00
Rentals of apparatus.....	59.10
Other line service.....	117.33
Total operating expenses.....	300.43
Net earnings	\$22.50
Surplus at beginning of year.....	\$34.94
Total surplus	\$57.44
Dividends	34.94
Surplus at the end of year.....	\$22.50

WIRE PLANT AND SERVICE DATA.

Wire plant:	
Grounded circuits.	
Service:	
City or village subscribers.....	4
Pay stations	5
Rural or farm line.....	8
Total	17

FOREST LAKE TELEPHONE COMPANY.

WINCHESTER, N. H.

This is a partnership formed November 12, 1908. The members are S. F. Hammond, A. L. Buchanan, E. C. Thompson, G. L. Scott, C. F. Wood, J. D. W. Sawyer, P. H. Pierce, C. C. Davis, Winchester, N. H. The officers are: President, E. C. Thompson; Clerk and Treasurer, Ansel L. Buchanan, Winchester, N. H. The line is 5¼ miles long; cost \$272.01, and connects with the New England Telephone & Telegraph Company. Each subscriber pays \$2.33 per quarter and tolls to the New England Telephone & Telegraph Company.

GRAFTON TELEPHONE COMPANY.

(Leon G. Valia, Owner.)

GRAFTON, N. H.

LOCALITY SERVED.

Grafton.

FIXED CAPITAL.

Capital invested	\$260.74
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INCOME ACCOUNT.

Operating revenues:	
Earnings from subscribers.....	\$91.57
Other earnings	1.50
Total operating revenues.....	\$93.07

Operating expenses:		
Labor and materials.....	\$67.97	
Taxes	3.20	
	<hr/>	
Total operating expenses.....		\$71.17
		<hr/>
Profit at close of year.....		\$21.90

WIRE PLANT AND SERVICE DATA.

Wire plant:
 Metallic circuits.
 Miles of poles, $\frac{1}{4}$ mile; miles of iron wire, $\frac{1}{4}$ mile.
 Service:
 City or village subscribers, 18.

HENNIKER TELEPHONE COMPANY.

HENNIKER, N. H.

PRINCIPAL OFFICERS.

President, Fred T. Connor, Contoocook, N. H.; Clerk, Curtis B. Childs;
 Treasurer and General Manager, George H. Sanborn; Auditors, W. O. Folsom
 and L. W. French, Henniker, N. H.

DIRECTORS.

Fred T. Connor, Levi W. French, Contoocook, N. H.; George H. Sanborn,
 Curtis B. Childs, Charles H. Parmenter, Henniker, N. H.

HISTORY.

Incorporated August 3, 1904, under the general laws of the State of
 New Hampshire. Amended May 8, 1905; May 25, 1908.

LOCALITIES SERVED.

Henniker, Hillsborough, Warner and Deering.

CAPITAL STOCK.

Common, authorized and outstanding:	
260 shares, par value \$25 each, total.....	\$6,500.00
Dividends declared and paid during year, 5%.....	325.00
Number of stockholders, 52; all in New Hampshire.	
Par value of stock held in New Hampshire.....	6,500.00

BALANCE SHEET.

Assets.

Cost of plant.....	\$6,616.37
Cash	219.90
Items receivable	780.30
Materials and supplies.....	110.00
Sinking fund	2,080.20
	<hr/>
Total	\$9,806.77

Liabilities.

Capital stock	\$6,500.00
Depreciation reserve	1,495.53
Surplus	1,811.24
	<hr/>
Total	\$9,806.77

INCOME ACCOUNT.

Operating revenues		\$2,171.10
Operating expenses:		
Maintenance—		
Repairs of equipment.....	\$259.52	
Station removals and changes.....	183.98	
Depreciation of plant and equipment.....	413.52	
Total	\$857.02	
Traffic—		
Operators' wages	476.96	
Central office supplies and expenses....	170.14	
Total	\$647.10	
Commercial—		
Collection expenses	\$50.00	
Directory expenses	12.00	
Other commercial expenses.....	5.15	
Total	\$67.15	
Taxes	125.32	
Dividends	325.00	
Total deductions		2,021.59
Surplus for year.....		\$155.51

WIRE PLANT AND SERVICE DATA.

	Beginning of year.	Added during year.	Discontinued during year.	Close of year.
Wire plant:				
Miles of poles installed..	34	1	...	35
Miles of iron wire installed	104	2	...	106
Character of service and number of subscribers:				
Village	55	2	5	52
Rural	132	5	12	125
Total	187	7	17	177

CENTRAL OFFICE DATA.

Number of central offices in operating system: 1.
 Character of switchboard: magneto.
 Total number of lines connected at each switchboard: 15.
 Ultimate capacity in number of lines of switchboard: 30.
 Average number of operator hours employed per day: 15.
 Approximate number of exchange originating calls per day: 550.

HOLLIS TELEPHONE COMPANY.

(A. F. Hildreth, Owner.)

HOLLIS, N. H.

LOCALITY SERVED.

Hollis, N. H.

BALANCE SHEET.

Assets.

Cost of plant.....	\$3,280.00
Items receivable	391.25
Loss	28.75
Total	\$3,700.00

Liabilities.

Investment	\$3,350.00
Items payable	350.00
Total	<u>\$3,700.00</u>

INCOME ACCOUNT.

Operating revenues:	
Earnings from subscribers.....	\$1,958.06
Other earnings	341.72
Total operating revenues.....	<u>\$2,299.78</u>
Operating expenses:	
Labor expense	\$900.00
Materials and other expense.....	940.00
Taxes	80.00
Total operating expenses.....	<u>1,920.00</u>
Net earnings	\$379.78
Interest	6.00
Profit for year.....	<u>\$373.78</u>

WIRE PLANT AND SERVICE DATA.

Wire plant—metallic circuits:

Miles of poles, 22; miles of iron wire, 87.

Character of service and number of subscribers:

Village, 5; pay stations, 1; rural, 110; extension stations, 3; total, 119.

CENTRAL OFFICE DATA.

Number of central offices in operating system: 1.

Character of switchboards: magneto, one position.

Total number of lines connected at switchboard: 22.

Ultimate capacity in number of lines of switchboard: 40 lines.

Average number of operator hours employed per day: 24.

Approximate number of exchange originating calls per day: 425.

Approximate daily average of toll messages (a) originating: 30; (b) terminating: 45.

HUDSON CENTER AND WEST WINDHAM TELEPHONE COMPANY.

WEST WINDHAM, N. H.

PARTNERS.

A. G. Clark and G. H. Clark, West Windham, N. H.

HISTORY.

Partnership formed: 1897.

LOCALITIES SERVED.

Windham, Pelham and Londonderry.

Lines also extend into the town of Hudson.

BALANCE SHEET.

Assets.

Cash	\$12.75
Accounts receivable	73.00
Fixed capital	1,000.00
Deficit	124.88
Total	<u>\$1,210.63</u>

Liabilities.

Current liabilities	\$210.63
Capital invested	1,000.00
Total	<u>\$1,210.63</u>

INCOME ACCOUNT.

Operating revenues:		
Subscribers' stations		\$552.00
Operating expenses:		
Traffic—		
Operators' wages	\$150.00	
Conducting operations—		
Office supplies and expenses.....	10.00	
Miscellaneous	236.00	
Total	<u>\$246.00</u>	
General administration—		
General office supplies and expenses....	75.00	
Taxes	24.00	
Total revenue deductions.....	<u>\$495.00</u>	
Interest on unfunded debt.....	7.50	
Total deductions from gross income.....		<u>502.50</u>
Net income		\$49.50
Deficit at beginning of year.....		<u>174.38</u>
Total deficit		<u>\$124.88</u>

WIRE PLANT AND SERVICE DATA.

Wire plant:
Metallic circuits.
Miles of poles, 11; miles of iron wire, 14.

Service:
Rural or farm line subscribers, 46.

JEFFERSON TELEPHONE COMPANY.

JEFFERSON, N. H.

PRINCIPAL OFFICERS.

President, John W. Crawshaw, Jefferson Highland, N. H.; Vice-President, L. D. Kenison, Starrking, N. H.; Clerk, Frank B. Pattee; Treasurer, William A. Crawford; Auditor and General Manager, John W. Crawshaw, Jefferson Highland, N. H.

DIRECTORS.

John W. Crawshaw, Jefferson Highland, N. H.; Manasah Perkins, L. T. McIntire, R. B. Eastman, Jefferson, N. H.; L. D. Kenison, Starrking, N. H.

HISTORY.

Incorporated August 28, 1904, under the general laws of the State of New Hampshire.

CAPITAL STOCK.

Common, authorized and outstanding:	
40 shares, par value \$25 each, total.....	\$1,000.00
Dividends declared during year, none.	
Number of stockholders, 14; number in New Hampshire, 12.	
Par value of stock held in New Hampshire.....	875.00

BALANCE SHEET.

Assets.

Cash	\$277.18
Accounts receivable	235.00
Materials and supplies	20.00
Fixed capital	2,730.00
Total	<u>\$3,262.18</u>

Liabilities.

Reserve for depreciation	\$730.00
Capital stock	1,000.00
Surplus	1,532.18
Total	<u>\$3,262.18</u>

INCOME ACCOUNT.

Operating revenues:

Exchange—	
Operators' wages	\$435.00
Subscribers' stations	\$1,245.51
Other exchange revenue	22.19

Total	<u>\$1,267.70</u>
Toll	956.51

Total operating revenues	<u>\$2,224.21</u>
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Operating expenses:

Other traffic expenses	1,364.51
Commercial expenses	55.25

Total operating expenses	<u>\$1,854.76</u>
Taxes	32.00

Total revenue deductions	<u>1,886.76</u>
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Net income	<u>\$337.45</u>
Surplus at beginning of year	1,098.93

Total surplus	<u>\$1,436.38</u>
Net adjustments during year	95.80

Surplus at close of year	<u>\$1,532.18</u>
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WIRE PLANT AND SERVICE DATA.

Wire plant:

Metallic circuits.
Miles of poles, 23; miles of iron wire, 51.

Service:

Subscribers—rural—	
Number at beginning of year	85
Added during year	10
Number at close of year	<u>95</u>

KEARSARGE TELEPHONE COMPANY.

SALISBURY, N. H.

PRINCIPAL OFFICERS.

President, W. S. Carr, Andover, N. H.; Clerk and Treasurer, T. R. Little, Salisbury, N. H.; Auditor, W. W. Burbank, Penacook, N. H.; General Manager, T. R. Little, Salisbury, N. H.

DIRECTORS.

A. A. Beaton, Franklin, N. H.; T. R. Little; Salisbury, N. H.; J. E. Shepard, New London, N. H.; B. W. Sanborn, Andover, N. H.; E. N. Sawyer, Salisbury, N. H.; W. P. Graves, East Andover, N. H.

HISTORY.

Incorporated June 24, 1899, under the general laws of the State of New Hampshire. In June, 1907, the Kearsarge Telephone Company purchased the plant of the Potter Place & New London Telephone Company, paying \$1,950 for it in stock of the Kearsarge Telephone Company.

LOCALITIES SERVED.

Salisbury, Webster, Boscawen, Andover, New London, Wilmot, and Franklin.

CAPITAL STOCK.

Common, authorized, 600 shares, par value \$25 per share, outstanding, 474 shares, par value..... \$11,850.00
Dividends declared during year, none.
Number of stockholders, 107; all in New Hampshire.

BALANCE SHEET.

Assets.

Cash	\$648.65
Accounts receivable	1,519.01
Materials and supplies.....	100.00
Fixed capital	14,271.00
Total	\$16,538.66

Liabilities.

Taxes accrued	\$119.97
Interest accrued on unfunded debt.....	50.00
Accounts payable	875.00
Miscellaneous accounts payable.....	44.65
Funded debt	2,000.00
Capital stock	11,850.00
Surplus	1,599.04
Total	\$16,538.66

FIXED CAPITAL.

Land	\$100.00
Buildings	965.00
Central office equipment.....	25.00
Subscribers' station equipment.....	2,250.00
Exchange lines:	
Pole lines	8,152.00
Aerial wire	2,698.00
Right of way.....	6.00
Office furniture and fixtures.....	25.00
Tools and vehicles.....	50.00
Total cost of fixed capital.....	\$14,271.00

INCOME ACCOUNT.

Operating revenues:	
Exchange—	
Subscribers' stations	\$4,981.29
Public pay stations.....	310.00
Total—exchange	\$5,291.29
Toll—(net)	1,717.05
Total operating revenues	\$7,008.34

LAKE MOREY TELEPHONE & TELEGRAPH COMPANY. 495

Operating expenses:

Maintenance—	
Supervision	\$2,169.31
Repairs of wire plant.....	1,050.00
Repairs of equipment.....	648.32
Repairs of buildings and grounds.....	40.21
Other expenses	551.17

Total—maintenance \$4,459.01

Traffic—

Operators' wages	\$1,257.00
Office supplies and expenses.....	200.00

Total—traffic \$1,457.00

Commercial—

Directory expenses.....	\$6.00
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General administration—

General office salaries	\$18.00
General office supplies and expenses....	25.00

Total—general administration \$43.00

Insurance	188.50
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Total operating expenses..... \$6,153.51

Taxes	165.13
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Total revenue deductions..... 6,318.74

Gross income \$689.70

Deductions from gross income:

Interest on unfunded debt.....	131.25
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Net income \$558.45

Surplus at beginning of year.....	1,540.59
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Total surplus \$2,099.04

Net adjustments during year.....	500.00
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Surplus at close of year..... \$1,599.04

WIRE PLANT AND SERVICE DATA.

	Beginning of year.	Added during year.	Discontinued during year.	Close of year.
Wire plant—metallic circuits:				
Miles of poles installed....	85	...	...	85
Miles of iron wire installed	302	...	...	302
Character of service and num- ber of subscribers:				
Pay stations	13	...	...	13
Rural	292	43	10	325
Total	305	43	10	338

LAKE MOREY TELEPHONE & TELEGRAPH COMPANY.

FAIRLEE, VT.

PRINCIPAL OFFICERS.

President, General Manager and Superintendent, F. C. Pushee; Vice-President and Clerk, C. C. Emerson; Treasurer, C. S. Wilmot; Auditor, S. C. Stevens, East Thetford, Vt.

DIRECTORS.

F. C. Pushee, C. C. Emerson, C. S. Wilmot, East Thetford, Vt.; W. J. George, Fairlee, Vt.; J. S. Eastman, East Thetford, Vt.; Charles Cambridge, Wilder, Vt.; F. T. Howard, North Thetford, Vt.

HISTORY.

Incorporated, 1905, under the general laws of the State of Vermont.

LOCALITIES SERVED.

Fairlee, Bradford, Thetford and Hartford, Vt., and Lebanon, N. H.

BALANCE SHEET.

Assets.

Cost of plant.....	\$3,459.25
Cash	12.00
Items receivable	400.00
Materials and supplies.....	338.36
Total	<u>\$4,209.61</u>

Liabilities.

Capital stock	\$1,560.00
Items payable	750.00
Profit	1,899.61
Total	<u>\$4,209.61</u>

INCOME ACCOUNT.

Operating revenues:	
Earnings from subscribers.....	\$1,170.00
Other earnings	154.30
Total operating revenues.....	<u>\$1,324.30</u>
Operating expenses:	
Labor expense	\$832.89
Materials and other expense.....	511.02
Taxes	20.53
Total operating expenses.....	<u>1,364.44</u>
Net loss	<u>\$40.14</u>
Interest	30.00
Loss for year.....	<u>\$70.14</u>

WIRE PLANT AND SERVICE DATA.

Wire plant:
 Metallic circuits.
 Miles of poles, 35; miles of iron wire, 70.
 Service:
 Rural, 81 stockholding subscribers; 22 non-stockholding subscribers.

CENTRAL OFFICE DATA.

Number of central offices, 3.
 Character of switchboard: 1 Bell and 1 drop switchboard; also connects into Norwich Central.
 Total number of lines connected at each switchboard: Thetford, 20; Fairlee, 10; Norwich, 24.
 Capacity in number of lines of each switchboard: Thetford, 50; Fairlee, 20.

LEMPSTER TELEPHONE COMPANY.

(F. A. Barton, Owner.)

LEMPSTER, N. H.

LOCALITIES SERVED.

Unity, Lempster and Acworth.

BALANCE SHEET.

Assets.

Cost of plant.....	\$1,500.00
Items receivable	611.61
Materials and supplies.....	20.00
Total	<u>\$2,131.61</u>

Liabilities.

Investment	\$1,108.41
Items payable	72.00
Profit	951.20
Total	<u>\$2,131.61</u>

INCOME ACCOUNT.

Operating revenues:	
Earnings from subscribers.....	\$780.00
Other earnings	159.00
Total operating revenues.....	<u>\$939.00</u>
Operating expenses:	
Labor expense	\$425.00
Materials and other expense.....	268.44
Taxes	24.75
Total operating expenses.....	<u>718.19</u>
Net earnings	\$220.81
Dividends	<u>220.81</u>
Profit for year.....	.....

WIRE PLANT AND SERVICE DATA.

Wire plant:
Miles of metallic lines, 10; miles of grounded lines, 40.
Service:
Subscribers' stations, 65.

LIVERMORE TELEPHONE COMPANY.

(Charles G. Saunders, Owner.)

LIVERMORE, N. H.

LOCALITIES SERVED.

Livermore and Hart's Location.

This line connects Livermore Mills with Sawyer River station.
Its business is principally with Livermore Mills.

INCOME ACCOUNT.

Operating revenues		\$216.18
Operating expenses:		
Maintenance of line.....	\$35.18	
Tolls paid on messages over the Ossipee		
Valley Tel. & Tel. Co.....	145.36	
Taxes	8.00	
Total operating expenses.....		188.54
Net earnings		\$27.64

WIRE PLANT DATA.

Miles of poles, 2; miles of iron wire, 4; length of copper wire, 600 feet.

LYME PEOPLE'S TELEPHONE COMPANY.

LYME, N. H.

PRINCIPAL OFFICERS.

President, George E. Stark, Lyme Center, N. H.; Vice-President, Fred Rich, Hanover, N. H.; Clerk, Ezra B. Alden, Lyme Center, N. H.; Treasurer, Fred W. Grant, Lyme, N. H.

DIRECTORS.

George E. Stark, Lyme Center, N. H.; Frank S. Hewes, Leslie J. Temple, Lyme, N. H.

HISTORY.

Incorporated March 24, 1905, under the general laws of the State of New Hampshire.

LOCALITIES SERVED.

Hanover and Lyme, N. H.

CAPITAL STOCK.

Common, authorized 100 shares, par value \$10 each; out-	
standing 83 shares, total par value.....	\$830.00
Dividends declared during year, none.	
Number of stockholders, 83; all in New Hampshire.	

BALANCE SHEET.

Assets.

Accounts receivable (miscellaneous).....	\$375.00
Fixed capital	1,325.20
Total	\$1,700.20

Liabilities.

Bills payable	\$296.34
Capital stock	830.00
Surplus	573.86
Total	\$1,700.20

INCOME ACCOUNT.

Operating revenues:		
Exchange—		
Subscribers' stations		\$1,170.00
Operating expenses:		
Maintenance	\$700.30	
Operators' wages	246.00	
Collection expenses	11.70	
Taxes	24.00	
		<hr/>
Total revenue deductions		982.00
		<hr/>
Net income		\$188.00
Surplus at beginning of year		644.15
		<hr/>
Total surplus		\$832.15
Net adjustments during year		70.29
Adjusted balance		761.86
Dividends		188.00
		<hr/>
Surplus at close of year		\$573.86

WIRE PLANT AND SERVICE DATA.

Wire plant:

Miles of poles, 48½; miles of iron wire, 88½.

Service:

Local and rural subscribers, 130.

CENTRAL OFFICE DATA.

Average number of operator hours employed per day, 15.

MADISON LOCAL TELEPHONE COMPANY.

MADISON, N. H.

PRINCIPAL OFFICERS.

President, N. M. Nason, Madison, N. H.; Vice-President, J. F. Chick, Silver Lake, N. H.; Clerk, Bertwell P. Gerry; Treasurer, Frank B. Nason, Madison, N. H.; Auditor, George Chick, Silver Lake, N. H.; General Manager, James O. Gerry, Madison, N. H.

DIRECTORS.

N. M. Nason, Madison, N. H.; J. F. Chick, Silver Lake, N. H.; Bertwell P. Gerry, Frank B. Nason, James O. Gerry, Madison, N. H.

HISTORY.

Incorporated November 27, 1905, under the general laws of the State of New Hampshire.

LOCALITIES SERVED.

Albany, Freedom, Madison and Tamworth.

CAPITAL STOCK.

Common, authorized 40 shares, par value \$25 each; out-	
standing, 35 shares, par value	\$900.00
Dividends declared during year, none.	
Number of stockholders, 6; all in New Hampshire.	

BALANCE SHEET.

Assets.

Cash	\$53.06
Bills receivable (notes)	40.00
Accounts receivable	274.15
Fixed capital	2,043.55
Total	<u>\$2,410.76</u>

Liabilities.

Accounts payable	\$377.69
Capital stock	900.00
Surplus	1,133.07
Total	<u>\$2,410.76</u>

FIXED CAPITAL.

Organization	\$25.00
Contracts and licenses	20.00
Subscribers' station equipment	150.00
Exchange lines:	
Pole lines	814.28
Aerial wire	984.27
Tools and vehicles	50.00
Total cost of fixed capital	<u>\$2,043.55</u>

INCOME ACCOUNT.

Operating revenues, all sources	\$1,337.53
Operating expenses:	
Maintenance	\$124.96
Operators' wages	420 00
Miscellaneous	238.92
Commercial expenses	33.24
Total operating expenses	<u>\$817.12</u>
Taxes	24.00
Total revenue deductions	<u>\$841.12</u>
Net income	\$496.41
Surplus at beginning of year	1,175.22
Total surplus	<u>\$1,671.63</u>
Net adjustments during year, Cr.	538.56
Surplus at close of year	<u>\$1,133.07</u>

WIRE PLANT AND SERVICE DATA.

	Beginning of year.	Added during year.	Discontinued during year.	Close of year.
Wire plant:				
Metallic circuits—				
Miles of poles	22 ½	3 ½	...	26
Miles of iron wire	49	7	...	56
Service:				
Pay stations	1	...	...	1
Rural	54	15	2	67
Total	<u>54</u>	<u>15</u>	<u>2</u>	<u>67</u>

LEON H. MARTIN.

GRAFTON, N. H.

LOCALITIES SERVED.

Grafton.

FIXED CAPITAL.

Fixed capital	\$75.00
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INCOME ACCOUNT.

Operating revenues:	
Exchange	\$32.00
Toll	2.50
Total operating revenues.....	\$34.50
Operating expenses:	
Labor expense	\$8.00
Materials and other expense.....	8.50
Taxes .....	.60
Total operating expenses.....	18.10
Net earnings	\$16.40

WIRE PLANT AND SERVICE DATA.

Wire plant:
Metallic circuits.
Miles of poles, 3; miles of iron wire, 3.

Service:
City or village subscribers, 1; rural, 6.

MASCOMA VALLEY TELEPHONE COMPANY.

LEBANON, N. H.

LOCATION OF OFFICE.

50 Oliver St., Boston, Mass.

PRINCIPAL OFFICERS.

President, Fred W. Story, Boston, Mass.; Vice-President, C. D. Smith;
Clerk, Fred A. Jones, Lebanon, N. H.; Treasurer, Edmund S. Willard;
Auditor, Edmund W. Longley, Boston, Mass.; General Manager, A. A. Howe,
Lebanon, N. H.; Assistant Clerk, Carl F. A. Siedhof, Boston, Mass.

DIRECTORS.

William R. Driver, Jr., Milton, Mass.; Matt B. Jones, Newton, Mass.;
Jasper N. Keller, Surry N. H.; Charles A. McNeill, George S. Rogers, C. D.
Smith, George H. Stearns, Lebanon, N. H.; Fred W. Story, Laconia, N. H.;
Lambert Whitney, Newton, Mass.

HISTORY.

Incorporated August 5, 1909, under the general laws of the State of
New Hampshire. Stock was issued in 1910 covering sale of plant of the
New England Telephone and Telegraph Company located at Canaan, Cornish,
Dorchester, Enfield, Grafton, Groton, Lebanon, Orange and Plainfield, N. H.

LOCALITIES SERVED.

Canaan, Danbury, Enfield, Grafton, Hanover, Lebanon, Meriden, Orange and Plainfield.

CAPITAL STOCK.

Common, authorized and outstanding:

1,440 shares, par value \$25 each, total.....	\$36,000.00
Dividends declared and paid during year, 7%.....	2,520.00
Number of stockholders, 37; number in New Hampshire, 29.	
Par value of stock held in New Hampshire.....	16,525.00

BALANCE SHEET.

Assets.

Cash and current assets:

Cash	\$7,954.03	
Accounts receivable:		
From system corporations.....	76.96	
From subscribers and agents.....	2,438.65	
Miscellaneous accounts receivable.....	1,549.55	
		\$12,019.19
Materials and supplies.....		1,630.40
Fixed capital		45,984.64
Prepayments		76.85
Total		\$59,711.08

Liabilities.

Current liabilities:

Taxes accrued	\$321.79	
Unearned revenue	65.29	
Accounts payable:		
Accounts with system corporations....	832.74	
Audited vouchers and wages unpaid.....	19.02	
		\$1,238.84
Reserve for depreciation.....		15,068.38
Optional reserves		243.34
Capital stock		36,000.00
Surplus		7,160.52
Total		\$59,711.08

INCOME ACCOUNT.

Operating revenues:

Exchange—		
Subscribers' stations	\$13,745.40	
Public pay stations.....	191.65	
Miscellaneous exchange revenue.....	27.96	
Total		\$13,965.01
Toll—		
Message tolls	\$4,542.09	
Miscellaneous toll revenue.....	4.32	
Messenger service	15.20	
Telegraph commissions	19.03	
Other telegraph service charges.....	2.75	
Rents from other operating property....	132.00	
Total		4,715.39
Total operating revenues.....		\$18,680.40

Operating expenses:

Maintenance—		
Supervision of maintenance.....	\$23.36	
Repairs of wire plant	916.68	
Repairs of equipment	347.35	
Repairs of buildings and grounds.....	14.21	
Station removals and changes.....	198.32	
Depreciation of plant and equipment....	3,507.89	
Repairs charged to reserves.....	.25	
Total		\$5,007.56

Traffic—	
Central office superintendence.....	\$21.97
Operators' wages	2,521.84
Central office supplies and expenses.....	286.42
Pay station expenses.....	31.16
Other traffic expenses.....	10.77
Total	\$2,872.16
Commercial—	
Commercial administration	\$28.80
Promotion expenses	300.95
Collection expenses	1,438.09
Directory expenses	112.17
Total	\$1,880.01
General administration—	
General office salaries	\$558.98
General office supplies and expenses....	140.84
Rent for conduits, poles and other sup- ports	916.34
Rent of instruments and equipment.....	577.66
Rent of telephone offices.....	419.00
General law expenses.....	1.50
Miscellaneous general expenses.....	389.89
Relief department and pensions.....	50.54
Total	\$3,054.75
Insurance	93.26
Total operating expenses.....	\$12,907.74
Taxes	737.02
Uncollectible bills	230.71
Total revenue deductions.....	13,875.47
Gross operating income.....	\$4,804.93
Non-operating revenue	126.41
Net income	\$4,931.34
Surplus at beginning of year.....	4,749.18
Total surplus	\$9,680.52
Dividends	2,520.00
Surplus at close of year.....	\$7,160.52

CENTRAL OFFICE DATA.

Exchange.	Switch- board Mag- neto.	Lines connected.				Ulti- mate Ca- pacity.
		Local.	Rural.	Toll.	Total.	
Canaan	1	152	7	9	168	100
Enfield	1	37	6	5	48	100
Lebanon	1	36	7	3	46	800
	3	225	20	17	262	1,000

WIRE PLANT AND SERVICE DATA.

	Beginning of year.	Added during year.	Dis- continued during year.	Ultimate capacity.
Wire plant (New Hampshire):				
Metallic circuits—				
Miles of poles	108	2.5	3.7	106.8
Miles of iron wire	558.5	35	34.3	559.2
Miles of copper wire.....	178	260.2	...	438.2
Feet of cable.....	11,034	9,596	...	20,630

Service:				
City or village—				
One party, business	24			25
One party, residence	34			42
Two party, business	37			50
Two party, residence	64			73
Six party, business	66			50
Six party, residence	223			233
Pay stations	28			27
	<hr/>			<hr/>
Total local stations.....	476			500
Rural—				
Rural or farm line, business	2	169	162	6
Rural or farm line, resi-				
dence	209			223
	<hr/>			<hr/>
Total rural stations....	211			229
	<hr/>			<hr/>
Total rural and local...	687			729
Extension stations, all kinds...	27			34
Private branch exchange sta-				
tions	47			5
Official stations	7			7
Receiving stations	1			1
	<hr/>	<hr/>	<hr/>	<hr/>
	769	169	162	776

MEREDITH TELEPHONE COMPANY.

LACONIA, N. H.

PRINCIPAL OFFICERS.

President, Fred W. Story, Boston, Mass.; Vice-President, Bertram Blaisdell; Clerk, Bradbury R. Dearborn, Meredith, N. H.; Treasurer, Edmund S. Willard; Auditor, Edmund W. Longley, Boston, Mass.; General Manager, H. T. Turner, Laconia, N. H.; Assistant Clerk, Carl F. A. Siedhof, Boston, Mass.

DIRECTORS.

John F. Beebe, Bertram Blaisdell, Bradbury R. Dearborn, Edmund Page, Meredith, N. H.; Fred W. Story, Laconia, N. H.

HISTORY.

Incorporated July 9, 1901, under the general laws of the State of New Hampshire.

LOCALITIES SERVED.

Ashland, Center Harbor, Holderness, Meredith and Moultonboro.

CAPITAL STOCK.

Common, authorized and outstanding:	
40 shares, par value \$25 per share, total.....	\$1,000.00
Dividends declared and paid during year, 6%.....	60.00
Number of stockholders, 8; number in New Hampshire, 7.	
Par value of stock held in New Hampshire.....	325.00

BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$44.65	
Accounts receivable:		
From subscribers and agents.....	1,009.01	
Miscellaneous accounts receivable.....	318.28	
		\$1,371.94
Materials and supplies.....		71.32
Fixed capital		19,027.52
Prepayments		2.84
Deficit		275.83
Total		\$20,749.45

Liabilities.

Current liabilities:		
Taxes accrued	\$130.08	
Unearned revenue	131.75	
Accounts payable:		
Accounts with system corporations.....	16,723.60	
Audited vouchers and wages unpaid....	133.78	
		\$17,119.21
Reserve for depreciation.....		2,387.24
Optional reserves		243.00
Capital stock		1,000.00
Total		\$20,749.45

INCOME ACCOUNT.

Operating revenues:

Exchange—		
Subscribers' stations	\$5,750.45	
Public pay stations.....	31.56	
Total		\$5,782.01
Toll—		
Message tolls	\$1,003.15	
Miscellaneous toll revenue.....	1.87	
Messenger service	8.88	
Telegraph commissions	5.55	
Total		1,019.45
Total operating revenues.....		\$6,801.46

Operating expenses:

Maintenance—		
Supervision of maintenance.....	\$2.61	
Repairs of wire plant	969.01	
Repairs of equipment	90.21	
Repairs of buildings and grounds.....	9.07	
Station removals and changes.....	104.19	
Depreciation of plant and equipment....	1,598.25	
Repairs charged to reserves.....	318.44	
Total	\$2,454.90	
Traffic—		
Central office superintendence.....	\$2.84	
Operators' wages	1,366.08	
Central office supplies and expenses....	336.24	
Pay station expenses.....	1.00	
Other traffic expenses.....	8.48	
Total	\$1,714.64	

Commercial—

Commercial administration	\$7.27
Promotion expenses	179.40
Collection expenses	421.60
Directory expenses	49.62
Other commercial expenses.....	.06

Total	\$657.95
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General administration—

General office salaries.....	\$327.48
General office supplies and expenses....	80.31
Rent of instruments and equipment.....	739.95
Rent for lease of telephone plant.....	236.59
Rent for conduits, poles and other sup- ports	217.44
Rent of telephone offices.....	170.32
General law expenses.....	.50
Miscellaneous general expenses.....	76.58
Relief department and pensions.....	39.43

Total	\$1,888.60
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Insurance	72.25
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Total operating expenses.....	\$6,788.34
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Taxes	226.08
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Uncollectible bills	67.35
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Total revenue deductions.....	7,081.77
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Gross loss	\$280.31
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Total deductions from gross income.....	879.15
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Net loss	\$1,159.46
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Surplus at beginning of year.....	943.63
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Total deficit	\$215.83
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Dividends	60.00
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Deficit at close of year.....	\$275.83
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CENTRAL OFFICE DATA.

Exchange.	Switch- board		Lines connected.			Ulti- mate capacity.
	magneto.	Local.	Rural.	Toll.	Total.	
Meredith	1	46	7	6	59	800
Center Harbor	1	29	6	3	38	100
	2	75	13	9	97	900

WIRE PLANT AND SERVICE DATA.

	Beginning of year.	Added during year.	Discontinued during year.	Close of year.
Wire plant (New Hampshire):				
Metallic circuits—				
Miles of poles.....	51	5.9	1.5	55.4
Miles of iron wire	230	64.5	...	294.5
Miles of copper wire	16	109.9	...	125.9
Feet of cable.....	2,800	6,085	1,625	7,260
Service:				
City or village—				
One party, business	4			4
One party, residence	18			17
Two party, business	3			5
Two party, residence.....	5			10
Six party, business	26			31
Six party, residence	123			99
Pay stations	8			6
Total local stations.....	187	123	75	172
Rural—				
Rural or farm line, business .....	...			10
Rural or farm line, resi- dence	120			167
Total rural stations....	120			177
Total local and rural...	307			349
Extension stations, all kinds...	11			10
Private branch exchange sta- tions .....	...			7
	318	123	75	366

MERIDEN TELEPHONE COMPANY.

(Harold W. Chellis, Proprietor.)

MERIDEN, N. H.

LOCALITIES SERVED.

Meriden and Cornish Flat, N. H.

GENERAL BALANCE SHEET.

Assets.

Cost of plant.....	\$1,232.00
Cash	25.00
Items receivable	80.00
Materials and supplies.....	10.00
Total	\$1,347.00

Liabilities.

Investment	\$1,000.00
Items payable	66.05
Profit	280.95
Total	\$1,347.00

INCOME ACCOUNT.

Operating revenues:		
Earnings from subscribers.....	\$713.00	
Other earnings	229.05	
	<hr/>	
Total operating revenues.....		\$942.05
Operating expenses:		
Labor expense	\$700.00	
Materials and other expense.....	100.00	
Taxes	28.05	
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Total operating expenses.....		828.05
		<hr/>
Profit for year.....		\$114.00
Profit at beginning of year.....		166.95
		<hr/>
Profit at close of year.....		\$280.95

WIRE PLANT AND SERVICE DATA.

Wire plant:	
Metallic and grounded circuits.	
Miles of poles, 15; miles of iron wire, 33.	
Service:	
Local stations	3
Rural or farm line.....	60
	<hr/>
Total local and rural.....	63

CENTRAL OFFICE DATA.

Central offices, 1.
Character of switchboard: magneto.
Total number of lines connected at each switchboard: 10.
Ultimate capacity in number of lines of each switchboard: 20.
Average number of operator hours employed per day: 21.
Approximate number of exchange originating calls per day: 10.
Approximate daily average of toll messages at date of report (a) originating,
10; and (b) terminating, 10, at exchange system.

CHARLES H. MERRILL.

MILL VILLAGE, STODDARD, N. H.

LOCALITY SERVED.

Line extends from Stoddard to the village of Munsonville in the town of Nelson, where connection is made with lines of the New England Telephone & Telegraph Company.

FIXED CAPITAL.

Fixed capital	\$400.00
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INCOME ACCOUNT.

Operating revenues	\$11.00
Operating expenses	16.00
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Net loss	\$5.00

MERRIMACK COUNTY TELEPHONE COMPANY.

WARNER, N. H.

PRINCIPAL OFFICERS.

Clerk, G. G. Wells, South Sutton, N. H.; Treasurer and General Manager, C. H. Hardy, Warner, N. H.

DIRECTORS.

Fred H. Savory, H. R. Tewksbury, Warner, N. H.; George G. Wells, South Sutton, N. H.

HISTORY.

Incorporated May 20, 1896, under the general laws of the State of New Hampshire.

LOCALITIES SERVED.

Bradford, Newbury, Sutton, Warner and Webster.

CAPITAL STOCK.

Number of shares authorized:	
Common stock	160
Par value of one share.....	\$25.00
Total par value authorized.....	4,000.00
Total par value outstanding.....	3,625.00
Dividends:	
Amount declared during year.....	.....
Number of stockholders	20
Number of stockholders in New Hampshire.....	12
Total par value of capital stock held in New Hampshire..	\$3,225.00

INCOME ACCOUNT.

Exchange revenue:	
Subscribers' stations	\$2,789.02
Toll service:	
Other toll line revenue.....	813.68
Total operating revenue.....	\$3,602.70
Operating expenses:	
Maintenance expenses—	
Supervision of maintenance.....	\$104.00
Repairs of wire plant	184.78
Repairs of equipment	540.63
Total	\$829.41
Traffic Expenses—	
Operators' wages	\$1,333.00
Central office supplies and expenses.....	106.88
Other traffic expenses.....	595.16
Total	\$2,035.04
Commercial expenses—	
Collection expenses	\$44.71
Directory expenses	4.89
Total	\$49.60
Insurance	75.00
Total operating expenses.....	\$2,989.05

Taxes	48.00	
Uncollectible bills	80.11	
Total revenue deductions.....		3,117.16
Gross operating income.....		\$485.54
Deductions from gross income—		
Interest on unfunded debt.....		91.24
Net income		\$394.30
Surplus at beginning of year.....		924.61
Total surplus		\$1,318.91
Net adjustments during year.....		546.46
Adjusted balance		\$1,865.37

WIRE PLANT AND SERVICE DATA.

	Beginning of year.	Added during year.	Close of year.
Wire plant:			
Metallic circuits—			
Miles of poles	49½	1½	51
Miles of iron wire	165	3	168
Service:			
City or village—			
One party, business.....	6	1	7
Two party, business.....	2	...	2
Pay stations	10	...	10
Rural—			
Rural or farm line.....	141	10	151
Telephones without rental.....	3	...	3

NEW BOSTON AND FRANCESTOWN TELEPHONE COMPANY.

FRANCESTOWN, N. H.

PRINCIPAL OFFICERS.

President, O. S. Waldo, New Boston, N. H.; Vice-President, Clerk and Treasurer, F. A. Pettee; Auditors, O. S. Waldo, Jr., J. T. Woodbury, L. M. Bixby; General Manager, E. W. Farnum, Frankestown, N. H.

DIRECTORS.

O. S. Waldo, New Boston, N. H.; F. A. Pettee, L. M. Bixby, G. E. Pettee, J. T. Woodbury, Frankestown, N. H.

HISTORY.

Incorporated May 9, 1911, under the general laws of the State of New Hampshire. Operations commenced: December, 1904. ?

LOCALITIES SERVED.

New Boston and Frankestown.

CAPITAL STOCK.

Common, authorized and outstanding:	
10 shares, par value \$100 each.....	\$1,000.00
Dividends declared during year.....	
Number of stockholders, 7; number in New Hampshire, 6.	
Par value of stock held in New Hampshire.....	900.00

GENERAL BALANCE SHEET.

Assets.

Cost of plant.....	\$1,600.00
Materials and supplies.....	10.00
Total	<u>\$1,610.00</u>

Liabilities.

Capital stock	\$1,000.00
Items payable	175.00
Profit	435.00
Total	<u>\$1,610.00</u>

INCOME ACCOUNT.

Operating revenues:	
Earnings from subscribers.....	\$391.19
Other earnings	30.00
Total operating revenues.....	<u>\$421.19</u>
Operating expenses:	
Labor expense	\$33.46
Materials and other expense.....	199.67
Taxes	16.00
Total operating expenses.....	<u>249.13</u>
Net earnings	\$172.06
Interest	\$4.50
Other payments	1.70
Total deductions	<u>6.20</u>
Profit for year.....	<u>\$165.86</u>

WIRE PLANT AND SERVICE DATA.

Wire plant:

Metallic circuits.

Miles of poles, 9½; miles of iron wire, 44; miles of copper wire, ¼.

Service:

Number of subscribers at beginning of year, 22; at close of year, 29.

NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY.

BOSTON, MASS.

PRINCIPAL OFFICERS.

Chairman of Board of Directors, Thomas Sherwin; President, Philip L. Spalding; Vice-President, Edward K. Hall; Vice-President and Treasurer, Francis A. Houston; General Manager, William R. Driver, Jr.; Assistant Treasurer and Assistant Secretary, John Balch; Assistant Treasurer, Edmund S. Willard; Counsel, Matt B. Jones; Secretary, Carl F. A. Siedhof; General Auditor, Edmund W. Longley; Auditor of Disbursements, Leslie D. Knowlton; Auditor of Receipts, Ralph P. Jones; Assistant to the Vice-President, Fred W. Story, Boston, Mass.

DIRECTORS.

Charles F. Ayer, Boston, Mass.; Union N. Bethel, Montclair, N. J.; Francis J. Dewey, Worcester, Mass.; W. Cameron Forbes, Westwood, Mass.; Henry S. Hyde, Springfield, Mass.; Jasper N. Keller, Surry, N. H.; Henry W. Keyes, North Haverhill, N. H.; Moses G. Parker, Lowell, Mass.; Thomas Sherwin, Jamaica Plain, Mass.; Charles P. Smith, Burlington, Vt.; Philip L. Spalding, Boston, Mass.; Bernard W. Trafford, Milton, Mass.; Theodore N. Vail, Lyndonville, Vt.; Charles H. Wilson, New York, N. Y.; Edward B. Winslow, Portland, Me.

HISTORY.

Incorporated October 19, 1883, under the general laws of the State of New York.

The constituent companies at the time of organization in 1883 were the Telephone Despatch Company, Suburban Telephone Company, Bay State Telephone Company, National Bell Telephone Company of Maine, Granite State Telephone Company, Boston and Northern Telephone Company, Cheshire Telephone Company, and Pioneer Telephone Company, all of which companies became inactive upon the organization of the New England Telephone and Telegraph Company, and from the date mentioned, no distinction is made in the operation or the accounting by reason of the original separate incorporation.

LOCALITIES SERVED.

(New Hampshire)

Cities and towns in which a switchboard operated by the New England Tel. & Tel. Co. is located: Alstead, Barrington, Bedford, Candia, Charles-town, Claremont, Concord, Deerfield, Derry, Dover, Dublin, Epping, Exeter, Farmington, Fitzwilliam, Goffstown, Greenfield, Greenville, Hampstead, Hampton, Hancock, Hanover, Harrisville, Hinsdale, Jaffrey, Keene, Kingston, Manchester, Marlboro, Merrimack, Milford, Milton, Nashua, New Boston, Newmarket, Newport, Northwood, Pembroke, Peterboro, Pittsfield, Portsmouth, Raymond, Rindge, Rochester, Rye, Salem, Somersworth, Sullivan, Troy, Walpole, Winchester, Wolfeboro.

Cities and towns in which the New England Tel. & Tel. Co. furnishes exchange service by means of a switchboard operated by it in some other city or town: Acworth, Allenstown, Alton, Amherst, Atkinson, Auburn, Barnstead, Boscawen, Bow, Brentwood, Brookfield, Brookline, Chester, Chesterfield, Chichester, Cornish, Croydon, Danville, Durham, East Kingston, Epsom, Francetown, Fremont, Gilsum, Goshen, Greenland, Hampton Falls, Hollis, Hooksett, Hopkinton, Hudson, Kensington, Langdon, Lebanon, Lee, Litchfield, Londonderry, Loudon, Madbury, Marlow, Mason, Middleton, Mount Vernon, Nelson, Newcastle, Newfields, Newington, New Ipswich, Newton, North Hampton, Nottingham, Pelham, Plaistow, Plainfield, Richmond, Rollinsford, Roxbury, Seabrook, Sharon, South Hampton, Stoddard, Strafford, Stratham, Sunapee, Surry, Swanzey, Temple, Tuftonboro, Unity, Wakefield, Westmoreland, Windham.

Cities and towns in which the New England Tel. & Tel. Co. does not furnish exchange service, but in which there are toll wires over which the New England Tel. & Tel. Co. gives service: Albany, Andover, Antrim, Ashland, Bartlett, Bath, Belmont, Bennington, Benton, Berlin, Bethlehem, Bradford, Bridgewater, Canaan, Canterbury, Carroll, Center Harbor, Conway, Dalton, Danbury, Deering, Dunbarton, Enfield, Franklin, Gilford, Gilmanton, Gorham, Grafton, Hart's Location, Haverhill, Henniker, Hillsboro, Jefferson, Laconia, Lancaster, Landaff, Lisbon, Littleton, Madison, Meredith, Moultonboro, Newbury, New Durham, New Hampton, New London, Northfield, Orange, Ossipee, Plymouth, Randolph, Rumney, Salisbury, Sandown, Sandwich, Shelburne, Tamworth, Tilton, Warner, Warren, Weare, Wentworth, Whitefield, Wilmot, Wilton.

CAPITALIZATION.

Capital stock:

Number of shares authorized, common stock.....	500,000
Par value of one share.....	\$100.00
Total par value authorized.....	50,000,000.00
Total par value outstanding.....	43,185,300.00

Dividends:

Amount declared during year.....	3,017,896.00
Rate, 7%.	
Number of stockholders.....	4,577
Number in New Hampshire.....	139
Total par value of capital stock held in New Hampshire....	\$273,400.00

Funded debt:**Debenture bonds—**

Term.	Par value. authorized.	Par value out- standing.	Rate.	Interest accrued during year.	Paid during year.
1895-1915	\$500,000	\$429,000	5	\$21,712.50	\$21,800.00
1896-1916	500,000	439,000	5	23,825.00	24,450.00
1899-1919	500,000	493,000	5	24,912.49	25,000.00
1900-1930	1,000,000	1,000,000	4	40,000.00	20,000.00
1912-1932	10,000,000	10,000,000	5	500,000.00	500,000.00
	<u>\$12,500,000</u>	<u>\$12,361,000</u>		<u>\$610,449.99</u>	<u>\$591,250.00</u>

Bond discount and expense amortized

BALANCE SHEET.*Assets.***Cash and current assets:**

Cash	\$473,653.91	
Bills receivable	426,072.72	
Accounts receivable:		
From system corporations.....	185,617.42	
From subscribers and agents.....	1,712,837.07	
Miscellaneous accounts receivable.....	338,424.14	
Interest and dividends receivable.....	2,813.75	
	<u></u>	\$3,139,419.01
Materials and supplies.....		339,567.49
Investments		4,641,568.95
Fixed capital		65,651,487.02
Prepayments		96,910.26
Unamortized debt expense.....		954.75
Accrued income not due.....		28,462.90
Total		<u>\$73,898,370.38</u>

*Liabilities.***Current liabilities:**

Taxes accrued	\$457,119.64	
Interest accrued on funded debt.....	142,876.59	
Unearned revenue	62,878.47	
Bills payable	693,000.00	
Accounts payable:		
Accounts with system corporations...	159,235.46	
Audited vouchers and wages unpaid..	440,041.86	
Dividends payable	21,821.00	
	<u></u>	1,976,973.02
Funded debt		12,361,000.00
Reserve for depreciation.....		11,602,001.61
Optional reserves (employees' benefit fund, insurance, etc.)		1,508,282.07
Capital stock		43,185,300.00
Surplus		3,264,813.68
Total		<u>\$73,898,370.38</u>

INVESTMENTS.

Nature of investment.	Capital stock, par value.	Actual cost.	Carried on books at.	Income accrued during year.
Aroostook Tel. & Tel. Co.	\$203,110.00	\$181,073.25	\$181,073.25	\$14,208.57
Bay State Rifle Ass'n	200.00	200.00	200.00	10.00
Champlain Valley Tel. Co.	53,950.00	43,597.70	43,597.70	3,087.30
Coos Telephone Co..	128,000.00	128,000.00	128,000.00	8,959.76
Cumberland Telephone Co. ....	.....	.....	.....	901.50
Eastern Tel. & Tel. Co.	117,775.00	117,795.00	117,795.00	8,229.27
Fall River Auto Tel. Co.	135,000.00	29,750.00	29,750.00	.....
Franklin County Tel. Co.	49,950.00	49,950.00	49,950.00	1,498.20
Granville Tel. Co....	67,800.00	72,720.00	72,720.00	.....
Heath Telephone Co.	41,640.00	41,640.00	41,640.00	2,258.86
Knox Tel. & Tel. Co.	215,400.00	148,628.00	148,628.00	7,912.50
Maine Tel. & Tel. Co.	223,680.00	189,962.00	189,962.00	12,089.60
Mascoma Valley Tel. Co.	27,725.00	27,725.00	27,725.00	2,019.27
Mass. Tel. & Tel. Co.	10,000.00	85,000.00	85,000.00	.....
Meredith Tel. Co....	875.00	875.00	875.00	42.00
New England Tel. & Tel. Co. of Mass.	25,000.00	25,000.00	25,000.00	.....
Ossipee Valley Tel. & Tel. Co.	41,125.00	34,575.00	34,575.00	1,558.98
Passumpsic Telephone Co.	189,650.00	189,650.00	189,650.00	.....
Portland Exposition Assn.	250.00	250.00	250.00	.....
Providence Tel. Co..	1,318,700.00	2,584,652.00	2,584,652.00	105,496.00
Puritan Tel. Co....	13,500.00	16,411.83	7,640.00	.....
Southern Mass. Tel. Co.	25,000.00	33,333.33	25,000.00	.....
Vermont Tel. & Tel. Co.	178,525.00	178,525.00	178,525.00	12,496.64
Waldo Tel. Co....	97,810.00	74,631.00	74,631.00	4,477.80
White Mountain Tel. & Tel. Co.	75,875.00	75,875.00	75,875.00	185.00
Winnepesaukee Tel. Co.	199,875.00	199,875.00	199,875.00	.....
Bonds—				
Fall River Auto. Tel. Co.	65,000.00	55,250.00	55,250.00	3,250.00
Maine Tel. & Tel. Co.	83,000.00	73,730.00	73,730.00	1,122.56
	\$3,588,415.00	\$4,658,674.11	\$4,641,568.95	\$189,803.81

FIXED CAPITAL.

Land	\$1,814,033.47
Buildings	4,110,193.27
Central office equipment.....	8,524,614.01
Subscribers' station equipment.....	7,242,506.41
Exchange lines:	
Pole lines	5,604,731.22
Aerial wire	4,860,326.50
Aerial cable	4,052,770.17
Underground conduit	7,412,111.54
Underground cable	6,335,559.10
Submarine cable	63,219.11
Right of way.....	611,271.83

Toll lines:	
Pole lines	3,301,550.87
Aerial wire	3,882,442.93
Aerial cable	289,593.67
Underground conduit	3,056,838.18
Underground cable	2,613,268.90
Submarine cable	89,052.20
Right of way	686,007.41
Office furniture and fixtures	481,569.09
Tools and vehicles	520,996.76
Unappraised property purchased	57,566.69
General store equipment	41,263.69
Total cost of fixed capital	\$65,651,487.02
Less reserve for depreciation	11,602,001.61
Total value of fixed capital	\$54,049,485.41

INCOME ACCOUNT.

Operating revenues:	
Exchange—	
Subscribers' stations	\$12,271,838.65
Public pay stations	1,123,756.10
Service stations	5,903.48
Attachments and rentals	92,341.76
Private exchange lines	60,152.49
Total	\$13,553,992.48
Toll—	
Telephone—	
Message tolls	\$4,056,883.99
Leased toll lines	20,336.02
Telegraph tolls	23,906.45
Telegraph service on toll lines	35,551.95
Attachments and rentals	19,360.71
Other toll line revenue	2.45
Total toll service	4,156,036.67
Miscellaneous operating revenue:	
Telegraph commissions	\$19,499.28
Other telegraph service charges	62,970.71
Rents from other operating property ..	40,077.73
Total miscellaneous operating revenues	122,547.72
Total operating revenue	\$17,832,576.87
Operating expenses:	
Maintenance expenses—	
Supervision of maintenance	\$158,793.71
Repairs of wire plant	1,108,031.78
Repairs of equipment	940,784.16
Repairs of buildings and grounds	146,581.11
Station removals and changes	402,077.46
Depreciation of plant and equipment ..	3,695,565.92
Repairs charged to reserves	649,481.71
Total	\$5,802,352.43
Traffic—	
Central office superintendence	\$432,284.34
Operators' wages	3,079,853.59
Central office supplies and expenses ..	496,646.30
Pay station expenses	55,913.44
Other traffic expenses	45,552.44
Total	\$4,110,250.11

Commercial—		
Commercial administration	\$518,364.16	
Promotion expenses	158,864.66	
Collection expenses	872,878.61	
Directory expenses	200,955.63	
Other commercial expenses.....	755.88	
Total	<u>\$1,751,818.94</u>	
General administration—		
General office salaries	\$233,967.09	
General office supplies and expenses..	48,844.12	
Rent of instruments and services.....	799,989.14	
Rent for conduits, poles and other sup- ports	85,160.03	
Rent of telephone offices.....	88,252.43	
General law expenses.....	59,870.00	
Law expenses connected with acci- dents and damages.....	9,069.22	
Miscellaneous general expenses.....	74,053.59	
Relief department and pensions.....	146,484.21	
Total	<u>\$1,545,689.83</u>	
Insurance	66,209.30	
Total operating expenses.....	<u>\$1,611,899.13</u>	
Taxes	949,315.48	
Uncollectible bills	141,656.30	
Total revenue deductions.....		<u>14,367,292.39</u>
Gross operating income.....		<u>\$3,465,284.48</u>
Non-operating revenues:		
Income from investments.....	\$189,803.81	
Interest and miscellaneous revenues....	100,169.11	
Total non-operating revenues.....		<u>289,972.92</u>
Gross income		<u>\$3,755,257.40</u>
Deductions from gross income—		
Interest on funded debt.....	\$610,449.99	
Interest on unfunded debt	7,473.71	
Total deductions from gross income.....		<u>617,923.70</u>
Net income		<u>\$3,137,333.70</u>
Surplus at beginning of year.....		3,138,634.40
Total surplus		<u>\$6,275,968.10</u>
Net adjustments during year (credit).....		6,741.58
Adjusted balance (surplus).....		<u>\$6,282,709.68</u>
Dividends		3,017,896.00
Surplus at close of year.....		<u>\$3,264,813.68</u>

CENTRAL OFFICE DATA.

Exchange.	Switch-board.	Lines connected.				Capacity installed.	Ultimate capacity.
		Local.	Rural.	Toll.	Total.		
Alstead, N. H....	m.*	32	9	4	45	55	100
Barrington, N. H.	m.	3	7	2	12	20	25
Bedford, N. H...	m.	6	4	2	12	25	25
Candia, N. H.....	m.	10	10	2	22	35	100
Charlestown, N. H.	m.	42	5	4	51	70	100
Claremont, N. H...	b.*	413	13	19	445	660	1,760
Concord, N. H...	b.	1,163	21	80	1,264	1,820	3,700
Deerfield, N. H...	m.	12	8	2	22	45	100
Derry, N. H.....	m.	148	12	9	169	190	800
Dover, N. H.....	b.	589	13	50	652	860	1,760
Dublin, N. H.....	m.	66	2	8	76	120	800
East Jaffrey, N. H.	m.	49	6	7	62	70	100
E. Sullivan, N. H.	m.	5	4	2	11	35	100
Epping, N. H.....	m.	38	9	6	53	60	100
Exeter, N. H.....	b.	275	16	36	327	540	800
Farmington, N. H.	m.	54	2	8	64	80	100
Fitzwilliam, N. H.	m.	27	5	5	37	55	100
Goffstown, N. H...	m.	39	6	5	50	55	100
Greenfield, N. H.	m.	14	4	4	22	40	100
Greenville, N. H...	m.	29	15	3	47	55	100
Hampstead, N. H.	m.	10	3	3	16	20	25
Hampton, N. H...	m.	109	2	11	122	140	800
Hancock, N. H...	m.	21	7	4	32	50	100
Hanover, N. H...	b.	126	...	8	134	220	1,760
Harrisville, N. H.	m.	5	5	3	13	25	25
Hinsdale, N. H...	m.	38	2	7	47	68	100
Keene, N. H.....	b.	713	20	43	776	980	2,300
Kingston, N. H...	m.	21	6	6	33	100	100
Manchester N. H.	b.	3,108	...	61	3,169	4,420	5,160
Marlboro, N. H...	m.	33	3	4	40	55	100
Merrimack, N. H.	m.	15	6	6	27	39	100
Milford, N. H....	m.	162	16	5	183	215	800
Milton, N. H.....	m.	21	4	4	29	50	100
Milton Mills, N. H.	m.	8	5	2	15	20	25
Nashua, N. H....	b.	1,467	10	42	1,519	2,080	3,200
New Boston, N. H.	m.	27	9	4	40	55	100
Newmarket, N. H.	m.	57	10	6	73	95	160
Newport, N. H...	m.	196	2	20	218	260	800
Northwood Center, N. H.	m.	23	8	3	34	50	100
Penacook, N. H...	m.	81	...	9	90	110	200
Peterboro, N. H.	m.	133	10	27	170	220	800
Pittsfield, N. H...	m.	69	15	4	88	115	200
Portsmouth, N. H.	b.	1,010	31	57	1,098	1,560	3,200
Raymond, N. H...	m.	30	7	5	42	60	100
Rindge, N. H.....	m.	16	7	5	28	50	100
Rochester, N. H...	m.	293	10	42	345	440	800
Rye Beach, N. H.	m.	77	5	11	93	106	200
Salem, N. H.....	m.	91	4	14	109	110	200
Somersworth, N. H.	m.	177	7	8	192	220	800
Suncook, N. H...	m.	59	4	6	69	80	100
Troy, N. H.....	m.	20	...	2	22	34	100
Walpole, N. H....	m.	73	6	5	84	100	200
Winchester, N. H.	m.	64	2	4	70	110	200
Wolfeboro, N. H.	m.	170	9	5	184	220	800
		11,537	406	704	12,647	17,367	34,725

*m.--magneto.

b.--common battery.

WIRE PLANT AND SERVICE DATA.

	Beginning of year.	Added during year.	Discontinued during year.	Close of year.
Wire plant (New Hampshire):				
Metallic circuits—				
Miles of poles	3,368.8	168.6	54.8	3,482.6
Miles of iron wire..	12,745	1,018	632	13,131
Miles of copper wire	46,837	8,668	2,359	53,146
Feet of cable.....	1,404,194	302,663	101,055	1,605,802
Service:				
City or village—				
One-party, business..	41,998			44,992
One-party, residence..	28,233			31,516
Two-party, business..	18,756			19,480
Two-party, residence..	91,969			108,861
Three-party, business	9			.....
Three-party, residence	2			.....
Four-party, business..	11,044			10,777
Four-party, residence	42,890			44,329
Six-party, business..	3,896			2,946
Six-party, residence..	33,032			37,202
Eight party, residence	15			1
Ten-party, business..	4			.....
Ten-party, residence..	6,769			4,046
Pay stations.....	11,706			13,985
Total local stations	290,323			318,135
		126,065	88,348	
Rural—				
Rural or farm line, business	863			845
Rural or farm line, residence	18,460			18,744
Rural or farm line, service stations...	719			737
Total rural stations	20,042			20,326
Total local and rural	310,365			338,461
Extension stations, all kinds	38,728			42,545
Private branch exchange stations	58,553			64,271
Official stations	2,693			2,779
	410,339	126,065	88,348	448,056

NORTH CONWAY & JACKSON TELEPHONE COMPANY.

NORTH CONWAY, N. H.

PRINCIPAL OFFICERS.

President, G. H. Shedd, North Conway, N. H.; Clerk, D. W. Barnes, Intervale, N. H.; Treasurer, J. Z. Shedd; Auditors, C. E. Poole, North Conway, N. H.; D. W. Barnes, Intervale, N. H.; General Manager, L. C. Barnes, Kearsarge, N. H.

DIRECTORS.

G. H. Shedd, North Conway, N. H.; D. W. Barnes, Intervale, N. H.; W. M. Wyman, Intervale, N. H.; W. D. H. Hill, North Conway, N. H.; H. E. Bean, Kearsarge, N. H.

HISTORY.

Incorporated November 14, 1903, under the general laws of the State of New Hampshire.

LOCALITIES SERVED.

North Conway, Bartlett and Jackson.

CAPITAL STOCK.

Common, authorized and outstanding:	
200 shares, par value \$25 each, total.....	\$5,000.00
Dividends declared during year, 5%.....	250.00

GENERAL BALANCE SHEET.

Assets.

Cost of plant.....	\$8,073.84
Cash	479.65
Items receivable	653.71
Materials and supplies.....	616.38
Total	\$9,823.58

Liabilities.

Capital stock	\$5,000.00
Items payable	3,249.09
Profit	1,574.49
Total	\$9,823.58

INCOME ACCOUNT.

Operating revenues:		
Earnings from subscribers.....	\$2,711.79	
Other earnings	1,900.81	
Total operating revenues.....		\$4,612.60
Operating expenses:		
Labor expense	\$1,697.18	
Materials and other expense.....	2,034.58	
Taxes	163.60	
Total operating expenses.....		3,895.36
Net earnings		\$717.24
Interest	\$160.42	
Dividends	250.00	
Total deductions		410.42
Profit for year.....		\$306.82

SERVICE DATA.

Service:	
City or village—	
One-party, business	4
One-party, residence	2
Two-party, business and residence.....	1
Local stations, within 6 miles of central.....	128
Rural—	
Rural or farm line, 6 miles or more out.....	40
Extension stations, all kinds.....	20

NOTTINGHAM TELEPHONE COMPANY.

NOTTINGHAM, N. H.

PRINCIPAL OFFICERS.

President, F. H. Fernald; Treasurer, F. Fernald, M. D., Nottingham, N. H.; Secretary, E. F. Gerrish, Lee, N. H.

HISTORY.

Incorporated January 21, 1907, under the general laws of the State of New Hampshire.

LOCALITIES SERVED.
Nottingham and Lee.

GENERAL BALANCE SHEET.

Assets.

Cost of plant.....	\$720.00
Cash	210.00
Items receivable	5.00
Materials and supplies.....	10.00
Total	\$945.00

Liabilities.

Capital stock	\$720.00
Profit	225.00
Total	\$945.00

INCOME ACCOUNT.

Operating revenues:	
Earnings from subscribers.....	\$117.18
Operating expenses:	
Labor expense	\$64.71
Taxes	16.50
Total operating expenses.....	81.21
Net earnings	\$35.97

WIRE PLANT AND SERVICE DATA.

Wire plant:

Grounded circuits. Miles of iron wire, 7 double wire.

Service:

City or village subscribers, 6 stockholding, 14 non-stockholding, total 20.

OSSIPPEE VALLEY TELEGRAPH & TELEPHONE COMPANY.

CORNISH, ME.

PRINCIPAL OFFICERS.

President, Fred W. Story, Boston, Mass.; Vice-President and Clerk, J. Merrill Lord, Parsonfield, Me.; Treasurer, Edmund S. Willard; Auditor, Edmund W. Longley, Boston, Mass.; General Manager, C. H. Leighton, Cornish, Me.; Assistant Clerk, Carl F. A. Siedhof, Boston, Mass.

DIRECTORS.

W. D. D. Churchill, Parsonsfield, Me.; George H. Dresser, Somerville, Mass.; William R. Driver, Jr., Milton, Mass.; Frank D. Fenderson, Limerick, Me.; E. E. Hastings, Fryeburg, Me.; W. T. Johnson, Bridgton, Me.; Matt B. Jones, Newton, Mass.; Jasper N. Keller, Surry, N. H.; A. Crosby Kennett, Conway, N. H.; Edmund W. Longley, Salem, Mass.; J. Merrill Lord, Parsonsfield, Me.; Fred C. Small, Cornish, Me.; Fred W. Story, Laconia, N. H.; Lambert N. Whitney; Benjamin J. Bowen, Newton, Mass.

HISTORY.

Authorized to operate in Cumberland, Oxford and York Counties, Maine, and in any other state, upon receiving proper authority.

LOCALITIES IN NEW HAMPSHIRE SERVED.

Albany, Bartlett, Bemis, Conway, Eaton, Effingham, Freedom, Jackson, Madison, Ossipee, Sandwich and Tamworth.

CAPITALIZATION.

Capital stock:

Common, authorized 800 shares, outstanding 385 shares, par value	\$9,625.00
Preferred, authorized 3,200 shares, outstanding 1,750 shares, par value	43,750.00
Dividends declared during year, common, none; preferred, 4 1/2 %	1,968.75
Number of stockholders, 57; number in New Hampshire, 4.	
Par value of stock held in New Hampshire	650.00
Funded debt:	
Mortgage bonds, authorized and outstanding 1903-1923, par value \$10,000, par value held in treasury	1,800.00
Par value held in special funds, \$3,800; par value not held	4,400.00
Interest accrued and paid during year, 5%	327.50

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:

Cash	\$1,258.02
Accounts receivable:	
From system corporations	1,155.50
From subscribers and agents	3,422.36
Miscellaneous accounts receivable	1,394.05
	<hr/>
	\$7,229.93
Materials and supplies	2,820.05
Sinking funds	3,992.77
Fixed capital	118,397.09
Prepayments	59.96
Re-acquired securities	1,800.00
	<hr/>
Total	\$134,299.80

Liabilities.

Current liabilities:

Taxes accrued	\$390.14
Accounts payable:	
Accounts with system corporations	4,188.88
Audited vouchers and wages unpaid	60.37
Miscellaneous accounts payable	137.11
Bills payable	39,894.57
	<hr/>
	\$44,671.07
Funded debt	10,000.00
Reserve for depreciation	20,724.55
Optional reserves	679.95
Capital stock—preferred	43,750.00
Capital stock—common	9,625.00
Surplus	4,849.23
	<hr/>
Total	\$134,299.80

SINKING FUNDS.

Cash paid to Mercantile Trust Co., Portland, Trustees, \$3,992.77, to create a sinking fund to redeem the bonded debt when it falls due.

FIXED CAPITAL.

Contracts and licenses.....		\$16,600.00
Central office equipment	}	
Subscribers' station equipment		
Exchange lines		
Toll lines		
Office furniture and fixtures, and tools and vehicles.....		2,691.35
Total cost of fixed capital.....		<u>\$118,397.09</u>

INCOME ACCOUNT.

Operating revenues:

Exchange—		
Subscribers' stations	\$17,287.04	
Public pay stations.....	864.02	
Miscellaneous exchange revenue.....	1,402.64	
Total		<u>\$19,553.70</u>
Toll—		
Message tolls	\$11,082.36	
Miscellaneous toll revenue.....	33.83	
Messenger service	17.67	
Telegraph commissions	43.69	
Other telegraph service charges.....	7.12	
Total		<u>11,184.67</u>
Total operating revenues.....		<u>\$30,738.37</u>

Operating expenses:

Maintenance—	
Supervision of maintenance.....	\$73.17
Repairs of wire plant	2,577.64
Repairs of equipment	1,316.85
Repairs of buildings and grounds.....	8.27
Station removals and changes.....	334.95
Depreciation of plant and equipment....	7,684.14
Repairs charged to reserves.....	791.89

Total	<u>\$11,203.13</u>
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Traffic—

Central office superintendence.....	\$167.19
Operators' wages	4,999.84
Central office supplies and expenses.....	724.74
Pay station expenses.....	6.82
Other traffic expenses.....	97.34

Total	<u>\$5,995.93</u>
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Commercial—

Commercial administration	\$252.44
Promotion expenses	96.99
Collection expenses	2,329.61
Directory expenses	47.07
Other commercial expenses.....	11.94

Total	<u>\$2,738.05</u>
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General administration—

General office salaries.....	\$924.29
General office supplies and expenses.....	345.33
Rents for conduits, poles and other supports	1,334.82
Rent of instruments and equipment.....	1,016.83
Rent for lease of telephone plant.....	45.97
Rent of telephone offices.....	729.05
General law expenses.....	.91
Accidents and damages.....	7.50
Miscellaneous general expenses.....	532.32
Relief department and pensions.....	120.46

Total	<u>\$5,057.48</u>
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Insurance	\$168.75	
Total operating expenses.....	\$25,163.34	
Taxes	831.72	
Uncollectible bills	457.81	
Total revenue deductions.....		\$26,452.87
Gross operating income.....		\$4,285.50
Non-operating revenue		23.54
Gross income		\$4,309.04
Deductions from gross income:		
Interest on funded debt.....	\$327.50	
Interest on unfunded debt.....	2,388.84	
Total deductions from gross income.....		2,716.34
Net income		\$1,592.70
Surplus at beginning of year.....		5,225.28
Total surplus		\$6,817.98
Dividends		1,968.75
Surplus at close of year.....		\$4,849.23

CENTRAL OFFICE DATA.

Exchange.	Line Connected.				Ca- pacity in- stalled.	Ulti- mate ca- pacity.
	Local.	Rural.	Toll.	Total.		
Conway	18	2	2	22	27	100
North Conway.....	41	...	10	51	80	800
Mountainview	14	5	4	23	23	40
Tamworth	6	5	1	12	15	20
Switchboard—magneto.						

WIRE PLANT AND SERVICE DATA.

	Beginning of year.	Added during year.	Discontinued during year.	Close of year.
Wire plant (New Hampshire):				
Metallic circuits—				
Miles of poles installed..	70	4	5	69
Miles of iron wire installed	557	4	123	438
Miles of copper wire in- stalled	40.5	18.6	10.9	48.2
Feet of cable installed....	830	700	780	750
Service:				
City or village—				
One-party, business	10			16
One-party, residence	15			18
Two-party, business	8			12
Two-party, residence	16			23
Six-party, business	105			103
Six-party, residence	188			213
Ten-party, business .....	...			6
Ten-party, residence	14			25
Pay stations	67			68
Total local stations.....	423	240	197	484
Rural—				
Rural or farm line, business	80			58
Rural or farm line, resi- dence	406			396
Service stations.....	...			4
Total rural stations.....	486			458
Total local and rural....	909			942
Extension stations, all kinds...	47			56
Private branch exchange stations	6			6
Official stations	6			7

PASSUMPSIC TELEPHONE COMPANY.

NEWPORT, VT.

PRINCIPAL OFFICERS.

President, Fred W. Story, Boston, Mass.; Vice-President, George H. Prouty, Newport, Vt.; Clerk, Alexander Dunnett, St. Johnsbury, Vt.; Treasurer, Edmund S. Willard; Auditor, Edmund W. Longley, Boston, Mass.; General Manager, C. A. Brown, Newport, Vt.

DIRECTORS.

Frank H. Brooks, St. Johnsbury, Vt.; George H. Dresser, Somerville, Mass.; William R. Driver, Jr., Milton, Mass.; C. S. Emery, Newport, Vt.; Matt B. Jones, Newton, Mass.; Jasper N. Keller, Surry, N. H.; Edmund W. Longley, Salem, Mass.; Fred D. Pierce, Barton, Vt.; W. I. Powers, Lyndonville, Vt.; George H. Prouty, Newport Vt.; Fred W. Story, Laconia, N. H.; M. M. Taplin, Orleans, Vt.; Lambert N. Whitney, Newton, Mass.

HISTORY.

Incorporated April 17, 1907, under the general laws of the State of Vermont.

Stock was issued May 14, 1907, in payment of plant of the New England Telephone and Telegraph Company located at Barnet, Barton, Brown-
ington, Burke, Concord, Coventry, Danville, Derby, East Haven, Ferdinand,
Gore, Granby, Irasburg, Jay, Kirby, Lowell, Lyndon Newark, Newport, St.
Johnsbury, Sheffield, Stannard, Troy, Victory, Waterford, Westfield, West-
more and Wheelock, Vermont, and Monroe, N. H. During the year ending
June 30, 1911, stock was issued and cash paid for plant of the Vermont
Peoples Telephone Company, located at Albany, Barton, Brighton, Brown-
ington, Charleston, Coventry, Derby, Glover, Holland, Irasburg, Jay, Lowell,
Morgan, Newport, Troy, Westfield and Westmore, Vermont, and for plant
of Essex Telephone Company, located at Brighton, Charleston, Derby, Hol-
land, Morgan, Norton and Westmore, Vermont. During the year ending
June 30, 1912, stock was issued in payment of the plant of the Citizens
Telephone and Telegraph Exchange, located in Monroe and Bath, New Hamp-
shire, and the following towns in Vermont: Barnet, Barton, Burke, Cabot,
Concord, Copenhagen, Danville, East Haven, Kirby, Lyndon, Newbury, Rye-
gate, St. Johnsbury, Sutton, Walden, Waterford and Wheelock. Cash was
paid for the plant of D. L. Maguire in the towns of Albany, Barton, Crafts-
bury, Glover, Greensboro, Hardwick, Irasburg and Wolcott, Vermont. During
the year ended June 30, 1913, cash was paid for the plant of the Greens-
boro and Glover Telephone Company, formerly operating in the State of
Vermont.

LOCALITIES IN NEW HAMPSHIRE SERVED.

Bath and Monroe.

CAPITAL STOCK.

Common, authorized 10,000 shares, outstanding 6,035 shares, total par value.....	\$150,875.00
Preferred, authorized 6,000 shares, outstanding 4,650 shares, total par value.....	116,250.00
Dividends declared during year, common, none; preferred, none.	
Number of stockholders, 134; number in New Hampshire, 5.	
Par value of stock held in New Hampshire.....	975.00

GENERAL BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$556.55
Accounts receivable:	
From system corporations.....	523.82
From subscribers and agents.....	14,304.61
Miscellaneous accounts receivable.....	10,793.46
	<hr/>
Materials and supplies.....	\$26,178.44
Fixed capital	25,496.29
Prepayments	376,549.67
	<hr/>
786.57	
Total	\$429,010.97

Liabilities.

Current liabilities:	
Unearned revenue	\$374.05
Accounts payable:	
Accounts with system corporations.....	8,481.79
Audited vouchers and wages unpaid....	333.04
Bills payable	142,932.28
	<hr/>
Reserve for depreciation.....	\$152,121.16
Optional reserves	7,731.93
Capital stock—preferred	1,733.37
Capital stock—common	116,250.00
Surplus	150,875.00
	<hr/>
299.51	
Total	\$429,010.97

FIXED CAPITAL.

Intangible capital		\$13,606.29
Land		315.50
Buildings		1,352.00
Central office equipment	}	353,235.25
Subscribers' station equipment		
Exchange lines		
Toll lines	}	8,040.63
Office furniture and fixtures		
Tools and vehicles		
Total		<u>\$376,549.67</u>

INCOME ACCOUNT.

Operating revenues:	
Exchange—	
Subscribers' stations	\$93,562.84
Public pay stations.....	803.61
	<hr/>
Total	\$94,366.45
Toll—	
Message tolls	\$19,161.39
Miscellaneous toll revenue.....	205.08
Messenger service	60.23
Telegraph commissions	228.01
Other telegraph service charges.....	1,167.30
	<hr/>
Total	20,822.01
	<hr/>
Total operating revenue.....	\$115,188.46
Operating expenses:	
Maintenance—	
Supervision of maintenance.....	\$985.53
Repairs of wire plant	9,996.81
Repairs of equipment	7,857.08
Repairs of buildings and grounds.....	33.27
Station removals and changes.....	1,379.81
Depreciation of plant and equipment....	22,959.05
Repairs charged to reserves.....	1,899.97
	<hr/>
Total	\$41,311.58

Traffic—		
Central office superintendence.....	\$464.43	
Operators' wages	25,399.43	
Central office supplies and expenses.....	3,370.35	
Pay station expenses.....	41.97	
Other traffic expenses.....	104.65	
Total	\$29,380.83	
Commercial—		
Commercial administration	\$1,645.10	
Promotion expenses	2,636.91	
Collection expenses	7,496.75	
Directory expenses	541.60	
Other commercial expenses.....	163.48	
Total	\$12,483.84	
General administration—		
General office salaries	\$3,834.11	
General office supplies and expenses....	697.58	
Rent for conduits, poles and other sup- ports	190.17	
Rent of instruments and equipment....	3,955.85	
Rent of telephone offices.....	2,333.48	
Rent for lease of telephone plant.....	207.50	
General law expenses.....	1,813.47	
Accidents and damages.....	55.02	
Law expenses connected with accidents and damages	50.47	
Miscellaneous general expenses.....	5,420.80	
Relief department and pensions.....	737.39	
Total	\$19,295.84	
Insurance	1,846.22	
Total operating expenses.....	\$104,318.31	
Taxes	4,569.58	
Uncollectible bills	1,148.55	
Total revenue deductions		\$110,036.44
Gross operating income.....		\$5,152.02
Non-operating revenue:		
Rents from other operated property.....	\$138.00	
Miscellaneous	29.49	
Net non-operating revenue.....		167.49
Gross income		\$5,319.51
Deductions from gross income.....		8,268.22
Net loss		\$2,948.71
Surplus at beginning of year.....		3,248.22
Surplus at close of year.....		\$299.51

CENTRAL OFFICE DATA.

Five rural lines in New Hampshire connected with the exchange at Barnet, Vt.

WIRE PLANT AND SERVICE DATA.

	Beginning of year.	Added during year.	Discontinued during year.	Close of year.
Wire plant (New Hampshire):				
Metallic circuits—				
Miles of poles	19	3.5	...	22.5
Miles of iron wire.....	65.2	.1	8.8	56.5
Miles of copper wire.....	...	1.9	...	1.9
Service:				
City or village—				
One-party, business	96	1,620	1,171	149
One-party, residence	70			109
Two-party, business	93			147
Two-party, residence	153			357
Six-party, business	463			367
Six-party, residence	1,949			1,658
Pay stations	96			91
Total local stations.....	2,920			2,878
Rural—				
Rural or farm line, busi- ness	88	1,620	1,171	96
Rural or farm line, resi- dence	1,687			2,133
Total rural stations....	1,775			2,229
Total local and rural...	4,695			5,107
Extension stations, all kinds...	182			204
Private branch exchange sta- tions	34			40
Official stations	17			22
Receiving stations .....	...			4
	4,928	1,620	1,171	5,377

PELHAM ASSOCIATION.

PELHAM CENTER, N. H.

PRINCIPAL OFFICERS.

Managers, H. M. Currier, F. H. Hillman; Agent, H. H. Atwood, Pelham, N. H.

LOCALITIES SERVED.

Pelham, N. H.

HISTORY.

This line was constructed in about 1902. It was built and is operated at present as a "mutual" company. The subscribers own their instruments, and the subscribers on the various lines built said lines and keep them in repair. Estimated value of line, \$1,000.00.

INCOME ACCOUNT.

Operating revenues:	
Earnings from subscribers.....	\$240.00
Other earnings	8.92
Total operating revenues.....	\$248.92

Operating expenses:	
Labor expense	\$240.00
Materials and other expense.....	55.11
Taxes	16.50
	<hr/>
Total operating expenses.....	\$311.61
	<hr/>
Net loss	\$62.69

WIRE PLANT AND SERVICE DATA.

Wire plant:
Metallic circuits. Miles of poles, 25; miles of iron wire, 50.
Services:
Number of subscribers, 60.

CENTRAL OFFICE DATA.

Number of central offices, 1, having two switchboards.
Character of switchboard: central energy.
Number of lines connected at each switchboard, 8 farmers' lines, switchboard having two N. E. Tel. & Tel. Co. trunk line connections for out-of-town service.
Capacity and number of lines of each switchboard, 10.

PIERMONT TELEPHONE COMPANY.

(H. E. Morrison, Proprietor.)

PIERMONT, N. H.

HISTORY.

Commenced operations May 7, 1902.

LOCALITIES SERVED.

Piermont and Orford.

GENERAL BALANCE SHEET.

Assets.

Cost of plant.....	\$3,000.00
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Liabilities.

Investment	\$3,000.00
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INCOME ACCOUNT.

Operating revenues	\$1,200.00
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Operating expenses:	
Labor expense	\$780.00
Materials and other expense.....	181.00
Taxes	56.00
	<hr/>
Total operating expenses.....	1,021.00
	<hr/>
Net earnings	\$179.00
Dividends	179.00

SERVICE DATA.

Rural or farm subscribers.....	100
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CENTRAL OFFICE AND WIRE PLANT DATA.

Number of central offices.....	1
Character of switchboard: magneto.	
Number of lines connected at each switchboard.....	21
Capacity in number of lines of each switchboard.....	40
Wire plant:	
Metallic circuits.	
Miles of poles, 20; miles of iron wire, 70 or 80; number of feet of cable, 200.	

PINE RIVER TELEPHONE COMPANY.

(Mabel Avery, Owner.)

MOUNTAINVIEW, N. H.

LOCALITIES SERVED.

Effingham.

FIXED CAPITAL.

Poles, wires and instruments.....	\$550.00
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INCOME ACCOUNT.

Operating revenues	\$234.00
Operating expenses:	
Repairs of equipment.....	\$100.00
Depreciation of plant and equipment.....	70.00
Other maintenance expenses.....	54.85
Taxes	8.00
Total	\$232.85

WIRE PLANT AND SERVICE DATA.

Wire plant:

Metallic circuits.

Miles of poles, 28; miles of iron wire, 28.

Service:

City or village subscribers, 1; rural or farm line, 12; total, 13.

CENTRAL OFFICE DATA.

Number of central offices: none.

Character of switchboards used: Connected at Mountainview, N. H., with N. E. Tel. & Tel. Co., and pay 70 cents and 95 cents per month for residence and business 'phones, respectively.

SANDOWN TELEPHONE COMPANY.

SANDOWN, N. H.

PRINCIPAL OFFICERS.

President, G. S. Sanborn; Clerk, Beverly Seeley, Sandown, N. H.; Treasurer, John D. Kelley; Auditor, T. F. Sargent, Chester, N. H., R. F. D. 3; General Manager, G. S. Sanborn, Sandown, N. H.

DIRECTORS.

I. N. A. McKay, C. I. Drowne, C. W. Goodwin, E. C. Mills, Chester, N. H., R. F. D. 3; J. W. Lovering, C. H. Knight, G. S. Sanborn, Sandown, N. H.

HISTORY.

Incorporated March 4, 1911, under the general laws of the State of New Hampshire.

LOCALITIES SERVED.

Sandown.

CAPITAL STOCK.

Common, authorized 40 shares, outstanding 28 shares.	
Total par value outstanding.....	\$700.00
Dividends declared during year, none.	
Number of stockholders, 27; number in New Hampshire, 26.	
Par value of stock held in New Hampshire.....	675.00

GENERAL BALANCE SHEET.

Assets.

Cash	\$592.54
Accounts receivable	125.55
Fixed capital	1,107.16
Total	\$1,825.25

Liabilities.

Taxes accrued	\$18.63
Accounts payable	182.51
Miscellaneous accounts payable.....	250.00
Capital stock	700.00
Surplus	674.11
Total	\$1,825.25

INCOME ACCOUNT.

Operating revenues:	
Exchange—	
Subscribers' stations	\$474.00
Public pay stations.....	5.65
Toll	112.89
Total operating revenues.....	\$592.54
Operating expenses:	
Maintenance	\$177.97
Traffic	403.25
Conducting operations	31.25
Taxes	18.63
Total revenue deductions	453.13
Net income	\$139.41
Surplus at beginning of year.....	534.70
Total surplus	\$674.11

WIRE PLANT AND SERVICE DATA.

Wire plant:	
Metallic circuits.	
Miles of poles, 6; miles of iron wire, 12.	
Service:	
Number of subscribers at beginning of year.....	42
Added during year.....	5
Total at end of year.....	47

SANDWICH LOCAL TELEPHONE COMPANY.

SANDWICH CENTER, N. H.

PRINCIPAL OFFICERS.

President, Herbert E. Moulton; Vice-President, Frank M. Smith; Treasurer, John S. Quimby; Auditor, William Heard; General Manager and Clerk, James L. Marston, Sandwich Center, N. H.

DIRECTORS.

Herbert E. Moulton, Frank M. Smith, J. A. Smith, John S. Quimby, Charles B. Hoyt, William Heard, Edward F. Wallace, Frank A. Bryor, James L. Marston, Sandwich Center, N. H.

HISTORY.

Incorporated February 8, 1901, under the general laws of the State of New Hampshire.

LOCALITIES SERVED.

Sandwich, Tamworth and Moultonboro.

CAPITAL STOCK.

Common, authorized and outstanding:	
1,400 shares, par value \$5.00 each, total.....	\$7,000.00
Dividends declared and paid during year, 6%.....	420.00
Number of stockholders, 35; number in New Hampshire, 31.	
Par value of stock held in New Hampshire.....	6,075.00

GENERAL BALANCE SHEET.

Assets.

Cash	\$309.00
Accounts receivable	500.00
Sinking funds	1,600.00
Fixed capital	7,756.53
Total	\$10,166.19

Liabilities.

Capital stock	\$7,000.00
Surplus	3,166.19
Total	\$10,166.19

INCOME ACCOUNT.

Operating revenues:		
Earnings from subscribers.....	\$2,241.00	
Other earnings	583.53	
Total operating revenues	\$2,824.53	
Operating expenses:		
Labor expense	\$1,246.25	
Materials and other expense.....	434.90	
Taxes	98.00	
Total operating expenses.....	779.15	
Net earnings	\$1,045.38	

Interest	\$420.00	
Other payments	233.33	
Total deductions		\$653.33
Profit for year		\$392.05

WIRE PLANT AND SERVICE DATA.

Wire plant:	
Metallic circuits.	
Service:	
City or village, one-party residence.....	4
Pay stations	1
Local stations	13
Rural stations	165

CENTRAL OFFICE DATA.

Number of central offices, 1.
 Character of switchboards: village, magneto.
 Total number of lines connected at each switchboard, 22.
 Ultimate capacity in number of lines of each switchboard, 50.
 Average number of operator hours employed per day, 24.
 Approximate number of exchange originating calls per day, 200.
 Approximate daily average of toll messages originating, 50.

SHOALS CABLE COMPANY.

RYE BEACH, N. H.

LOCATION OF OFFICE.

175 Congress St., Boston, Mass.

PRINCIPAL OFFICERS.

President, Robert Morton, Somerville, Mass.; Treasurer, C. W. Crane, East Boston, Mass.; Secretary, W. O. Forbes, Boston, Mass.

DIRECTORS.

Robert Morton, Somerville, Mass.; C. W. Crane, East Boston, Mass.; W. O. Forbes, Boston, Mass.; E. L. Kimball, Lowell, Mass.; C. L. Egin, West Somerville, Mass.

HISTORY.

Organized August 2, 1909. It holds stock of the Shoals Telephone and Telegraph Company that was organized to replace the Gardner Cable Company, which operated under special charter by the State of New Hampshire.

DESCRIPTION.

It consists of 5.51 miles of cable and one-half mile of iron wire extending from Appledore Island, Maine, to Rye Beach, New Hampshire, where it connects with the N. E. Tel. & Tel. Co. and the W. U. Tel. Co.

GENERAL BALANCE SHEET.

Assets.

Cost of plant	\$36,500.00
Treasury stock	17,000.00
Loss	68.50
Total	\$53,568.50

Liabilities.

Capital stock	\$50,000.00
Items payable	3,568.50
Total	<u>\$53,568.50</u>

INCOME ACCOUNT.

Operating revenues	\$54.00
Operating expenses:	
Labor expense	\$66.50
Materials and other expense.....	48.00
Taxes	8.00
Total operating expenses.....	<u>122.50</u>
Net loss	<u>\$68.50</u>

CENTRAL OFFICE AND WIRE PLANT DATA.

Number of lines connected at switchboard: 1 station on Appledore Island, Maine.
 Wire plant:
 Common return.
 Miles of cable, 7½.

CONNECTING LINES.

Names of connecting lines, New England Telephone & Telegraph Company at Rye Beach, N. H.

SOUTHERN COÖS TELEPHONE COMPANY.

COLEBROOK, N. H.

PRINCIPAL OFFICERS.

President and General Manager, W. E. Smith; Vice-President, Charles Martin; Clerk, M. E. Smith; Treasurer, W. E. Smith; Auditor, T. F. Johnson, Colebrook, N. H.

DIRECTORS.

W. E. Smith, Charles Martin, Amasa Frizzell, Colebrook, N. H.

HISTORY.

Incorporated May 15, 1907, under the general laws of the State of New Hampshire.

LOCALITIES SERVED.

Colebrook, Columbia, Stratford and Northumberland, New Hampshire; Lemington, Bloomfield and Maidstone, Vermont.

CAPITAL STOCK.

Common, authorized 400 shares.	
Outstanding 183 shares, par value \$25 each, total.....	\$4,575.00
Dividends declared during year, none.	
Number of stockholders, 15; number in New Hampshire, 10.	
Par value of stock held in New Hampshire.....	3,725.00

GENERAL BALANCE SHEET.

Assets.

Cost of plant	\$6,960.70
Cash	24.25
Items receivable	357.68
Materials and supplies	77.43
Total	<u>\$7,420.06</u>

Liabilities.

Capital stock	\$4,575.00
Items payable	2,820.81
Profit	24.25
Total	<u>\$7,420.06</u>

FIXED CAPITAL.

Organization	\$250.00
Central office equipment.....	350.00
Subscribers' station equipment.....	1,608.75
Exchange lines:	
Pole lines	3,694.20
Aerial wire	667.20
Right of way.....	41.66
Repair shop equipment	25.00
Total cost of fixed capital.....	<u>\$6,636.81</u>

INCOME ACCOUNT.

Operating revenues:		
Earnings from subscribers	\$1,059.84	
Other earnings	12.00	
Total operating revenues.....		<u>\$1,071.84</u>
Operating expenses:		
Labor expense	\$321.58	
Materials and other supplies.....	552.44	
Taxes	90.00	
Total operating expenses.....		<u>964.02</u>
Net earnings		\$107.82
Interest		83.57
Profit for year		<u>\$24.25</u>

WIRE PLANT AND SERVICE DATA.

Wire plant:
Metallic and grounded circuits.
Miles of poles, 64½; miles of iron wire, 112½.
Service:
Total stations, 117.

CENTRAL OFFICE DATA.

Number of central offices in operating system: 3.
Character of switchboards: magneto.
Number of lines connected at each switchboard: Colebrook 8, Bloomfield 5, Groveton, 6.
Ultimate capacity in number of lines of each switchboard: Colebrook, 25, Bloomfield 30, Groveton 50.

SUGAR RIVER VALLEY TELEPHONE COMPANY.

GRANTHAM, N. H.

PRINCIPAL OFFICERS.

President, S. W. Gilman, Croydon, N. H.; Vice-President, J. H. Dunbar; Clerk, J. M. Howe; Treasurer, L. Barton, Grantham, N. H.; General Manager, D. S. Gross, Croydon, N. H.

DIRECTORS.

S. W. Gilman, Croydon, N. H.; L. Barton, J. H. Dunbar, Grantham, N. H.; D. S. Gross, Croydon, N. H.; F. G. Whitney, Grantham, N. H.

HISTORY.

Incorporated November 8, 1902, under the general laws of the State of New Hampshire. Amended: January 7, 1904; January 26, 1912.

LOCALITIES SERVED.

Grantham, Croydon and Springfield.

CAPITAL STOCK.

Common, authorized and outstanding:	
61 2-5 shares, par value \$25 each, total.....	\$1,535.00
Dividends declared and paid during year, 5%.....	76.75
Number of stockholders, 44; all in New Hampshire.	

GENERAL BALANCE SHEET.

Assets.

Cash	\$100.89
Accounts receivable	926.40
Materials and supplies	50.00
Fixed capital	1,560.00
Total	\$2,637.29

Liabilities.

Accounts payable	\$649.42
Dividends payable	76.75
Other unfunded debt	100.00
Capital stock	1,535.00
Surplus	276.12
Total	\$2,637.29

INCOME ACCOUNT.

Operating revenues:	
Toll	10.07
Subscribers' stations	\$1,311.75
Miscellaneous operating revenue.....	19.92
Total operating revenues	\$1,461.74
Operating expenses:	
Maintenance	\$529.30
Traffic—	
Operators' wages	352.25
Pay station expenses.....	2.27
Rental of equipment	355.70
Total	\$710.22

Commercial	\$37.43
General administration	51.00
Total operating expenses	\$1,327.95
Taxes	32.00
Total revenue deductions	\$1,359.95
Net income	\$101.79
Surplus at beginning of year.....	251.08
Total surplus	\$352.87
Dividends	76.75
Surplus at close of year.....	\$276.12

WIRE PLANT AND SERVICE DATA.

Wire plant:
 Metallic circuits.
 Miles of poles, 32; miles of iron wire, 130.
 Service:
 Number of subscribers, rural, 98.

SUNAPEE TELEPHONE COMPANY.

(Estate of D. W. Barton, Owner.)

SUNAPEE, N. H.

HISTORY.

Commenced operations: 1901.

LOCALITIES SERVED.

Sunapee, New London, Springfield, Newbury, Goshen and Croydon.

GENERAL BALANCE SHEET.

Assets.

Cash and current assets.....	\$1,925.00
Materials and supplies.....	400.00
Fixed capital	3,325.00
Total	\$5,650.00

Liabilities.

Current liabilities	\$1,425.00
Capital stock	4,000.00
Surplus	225.00
Total	\$5,650.00

FIXED CAPITAL.

Subscribers' station equipment.....	\$25.00
Exchange lines:	
Pole lines	1,425.00
Aerial wire	2,200.00
Office furniture and fixtures.....	50.00
Tools and vehicles.....	25.00
Total cost of fixed capital.....	\$3,725.00

UNION TELEPHONE COMPANY.

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INCOME ACCOUNT.

Operating revenues:

Exchange—		
Subscribers' stations	\$2,360.00	
Public pay stations.....	150.00	
Total—exchange		\$2,510.00
Toll—		
Message tolls	\$1,995.00	
Attachments and rentals.....	150.00	
Total—toll		2,145.00
Total operating revenues		\$4,655.00

Operating expenses:

Maintenance—		
Repairs of wire plant.....	\$250.00	
Miscellaneous	225.00	
Total—maintenance	\$475.00	
Traffic—		
Superintendence	\$635.00	
Operators' wages	750.00	
Office supplies and expenses.....	275.00	
Other traffic expenses	1,900.00	
Total—traffic	\$4,035.00	
Commercial—		
Collection expenses	75.00	
Total operating expenses.....	\$4,110.00	
Taxes	99.00	
Total revenue deductions.....		4,209.00
Net earnings		\$446.00

SERVICE DATA.

Number of subscribers, 275; extension stations, 12.

UNION TELEPHONE COMPANY.

NORTH BARNSTEAD, N. H.

PRINCIPAL OFFICERS.

President, H. J. Jones, Alton, N. H.; Vice-President, F. J. Holmes, Center Barnstead, N. H.; Clerk, H. P. Boody, Farmington, N. H.; Treasurer, B. F. Dow, North Barnstead, N. H.; Auditors, G. W. Dow and C. E. Walker, South Barnstead, N. H.

DIRECTORS.

H. J. Jones, Alton, N. H.; F. J. Holmes, Center Barnstead, N. H.; H. P. Boody, Farmington, N. H.; B. F. Dow, North Barnstead, N. H.; C. H. Perry, South Barnstead, N. H.

HISTORY.

Incorporated May 22, 1903, under the general laws of the State of New Hampshire. Amended: December 21, 1903; July 1, 1907; May 3, 1909; July 10, 1911; May 22, 1912.

LOCALITIES SERVED.

Barnstead, Alton, New Durham and part of the towns of Farmington, Strafford and Gilmanton.

CAPITAL STOCK.

Common, authorized and outstanding:	
240 shares, par value, \$25 each, total.....	\$6,000.00
Dividends declared during year, 6%.....	310.50
Number of stockholders, 109; number in New Hampshire, 105.	
Par value of stock held in New Hampshire.....	5,650.00

GENERAL BALANCE SHEET.

Assets.

Cost of plant	\$10,422.64
Cash	840.05
Items receivable	740.10
Materials and supplies	100.00
Total	\$12,102.79

Liabilities.

Capital stock	\$6,000.00
Items payable	1,187.96
Profit	4,914.83
Total	\$12,102.79

INCOME ACCOUNT.

Operating revenues:		
Earnings from subscribers	\$3,236.98	
Other earnings	1,734.49	
Total earnings		\$4,971.47
Operating expenses:		
Labor expense	\$1,956.70	
Materials and other expense.....	1,152.38	
Taxes	178.48	
Total operating expenses.....		3,287.56
Net earnings		\$1,083.91
Interest	\$72.06	
Dividends declared	310.50	
Total deductions		382.56
Profit for year		\$701.35

WIRE PLANT AND SERVICE DATA.

Wire plant:

Miles of poles, 60¼; miles of iron wire, 257; feet of cable, 100.

Service:

City or village	69
Pay stations	8
Rural or farm line	243
Total	320

CENTRAL OFFICE DATA.

Number of central offices, 2.

Character of switchboards: magneto.

Total number of lines connected at each switchboard: North Barnstead Exchange 16, Alton Exchange, 17.

Ultimate capacity in number of lines of each switchboard: North Barnstead, 30; Alton, 50.

Average number of operator hours employed per day: 48.

Approximate number of exchange originating calls per day, 710.

CONNECTING LINE DATA.

	No. lines.	What payments are made.
N. E. Tel. & Tel. Co.....	3	Lines leased.
(Connecting at Farmington Ex.)		
Winnepesaukee Tel. Co.....	3	Commission on toll business.
(Connecting with Laconia Ex.)		

WAKEFIELD TELEPHONE COMPANY.

SANBORNVILLE, N. H.

PRINCIPAL OFFICERS.

President and General Manager, Edwin A. Himes, Sanbornville, N. H.;
Clerk, E. E. Scott, East Wakefield, N. H.; Treasurer, John H. Garvin, San-
bornville, N. H.

DIRECTORS.

Edwin A. Himes, John H. Garvin, Sanbornville, N. H.; E. E. Scott, East
Wakefield, N. H.

HISTORY.

Incorporated August 15, 1902, under the general laws of the State of
New Hampshire.

LOCALITIES SERVED.

Wakefield and Brookfield, New Hampshire; Newfield, Maine.

CAPITAL STOCK.

Common, authorized and outstanding:	
40 shares, par value \$25 each, total.....	\$1,000.00
Dividends paid during year, 2 semi-annual dividends, 10%...	100.00
Number of stockholders, 12; number in New Hampshire, 11.	
Par value held in New Hampshire.....	975.00

BALANCE SHEET.

Assets.

Cost of plant	\$1,500.00
Cash	287.43
Items receivable	374.97
Total	\$2,162.40

Liabilities.

Capital stock	\$1,000.00
Profit	1,162.40
Total	\$2,162.40

INCOME ACCOUNT.

Operating revenues:	
Earnings from subscribers.....	\$2,764.70
Other earnings	140.91
Total operating revenues.....	\$2,905.61

Operating expenses:

Labor expense	\$631.10
Materials and other expense.....	1,795.72
Taxes	32.00

Total operating expenses.....	\$2,458.82
Net earnings	\$446.79

Interest	\$9.00
Dividends	100.00

Total deductions	109.00
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Profit for year.....	\$337.79
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WIRE PLANT AND SERVICE DATA.

Wire plant:

Metallic circuits.

Miles of poles, 15; miles of iron wire: nearly 2 miles in process of construction.

Service:

Subscribers, village, 93; pay stations, 3; total, 96.

CENTRAL OFFICE DATA.

Number of central offices in operating system: 2.

Character of switchboards: magneto.

Total number of lines connected at switchboard: 21.

Ultimate capacity in number of lines of switchboard: 20.

Average number of operator hours employed per day: continuous service with 3 operators; night operator, 11 hours; day operators, 6½ hours each.

F. L. WALBRIDGE.

WOODSVILLE. N. H.

LOCALITIES SERVED.

Woodsville, N. H.

BALANCE SHEET.

Assets.

Cost of plant.....	\$777.75
Cash	225.80
Materials and supplies.....	250.00
Total	\$1,253.55

Liabilities.

Investment	\$1,027.75
Profit	225.80
Total	\$1,253.55

INCOME ACCOUNT.

Operating revenues:

Earnings from subscribers.....	\$561.00
Other earnings	142.00

Total operating revenues	\$703.00
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Operating expenses:

Labor expense	\$328.50
Materials and other expense.....	140.70
Taxes	8.00

Total operating expenses.....	477.20
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Net earnings	\$225.80
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SERVICE DATA.

Business subscribers	17
Residence subscribers	17
Total	34

CENTRAL OFFICE AND WIRE PLANT DATA.

Number of central offices, 1.
 Character of switchboard: magneto.
 Total number of lines connected at each switchboard: 23.
 Capacity in number of lines of each switchboard: 100.
 Wire plant:
 Metallic circuits.
 Miles of poles, 2; miles of iron wire, 14.

 WASHINGTON & CHERRY VALLEY TELEPHONE COMPANY.

(Wallace W. Dole, Owner.)

WASHINGTON, N. H.

LOCALITIES SERVED.

Hillsborough, Windsor, Washington, Goshen and Newport.

BALANCE SHEET.

Assets.

Cost of plant	\$2,772.14
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Liabilities.

Investment	\$2,600.00
Profit	172.14
Total	\$2,772.14

INCOME ACCOUNT.

Operating revenues:	
Earnings from subscribers.....	\$1,866.00
Other earnings	797.11
Total operating revenues	\$2,663.11
Operating expenses:	
Labor expense	\$990.86
Materials and other expense.....	245.33
Taxes	24.00
Total operating expenses.....	1,260.19
Net earnings	\$1,402.92

WIRE PLANT AND SERVICE DATA.

Wire plant:
 Part metallic and part grounded circuits.
 Miles of poles, 122; miles of iron wire, 122.
 Service:
 Subscribers, rural or farm, 124.

CENTRAL OFFICE DATA.

Number of central offices, 2.
 Character of switchboards, magneto.
 Number of lines connected at each switchboard: Hillsboro Upper Village, 12; Goshen, 3.

WEARE TELEPHONE COMPANY.

WEARE CENTER, N. H.

PRINCIPAL OFFICERS.

President, Lindley H. Farr, North Weare, N. H.; Clerk, Treasurer and General Manager, W. S. B. Herbert, Weare, N. H.; Auditor, E. C. Breed, East Weare, N. H.

DIRECTORS.

William W. Eastman, South Weare, N. H.; Lindley H. Farr, North Weare, N. H.; W. S. B. Herbert, Weare, N. H.; George F. Eastman, South Weare, N. H.; Frank Eaton, East Weare, N. H.

HISTORY.

Incorporated July 19, 1904, under the general laws of the State of New Hampshire.

LOCALITIES SERVED.

Weare, New Boston, Deering and Hopkinton.

CAPITAL STOCK.

Common, authorized and outstanding:	
*120 shares, par value \$25 each, total.....	\$3,000.00
Dividends declared and paid during year.....	292.50
Number of stockholders, 101; in New Hampshire, 100.	

BALANCE SHEET.

Assets.

Cash	\$1,522.89
Accounts receivable	362.80
Materials and supplies.....	208.97
Investments	120.00
Fixed capital	5,816.68
Total	<hr/> \$8,031.34

Liabilities.

Miscellaneous accounts payable.....	\$250.35
Reserve for depreciation.....	1,622.45
Capital stock	3,000.00
Surplus	3,158.54
Total	<hr/> \$8,031.34

FIXED CAPITAL.

Central office equipment }	
Subscribers' station equipment }	\$1,583.29
Exchange lines:	
Pole lines }	
Aerial wire }	4,233.39
Total cost of fixed capital.....	<hr/> \$5,816.68

*3 shares reacquired, cost value, \$85.00.

INCOME ACCOUNT.

Operating revenues:		
Exchange revenues	\$2,256.86	
Toll service	426.35	
Total operating revenues.....		\$2,683.21
Operating expenses:		
Maintenance—		
Repairs of equipment }	\$627.49	
Repairs of wire plant }		
Depreciation of plant and equipment.....	612.50	
Total	\$1,239.99	
Traffic expenses	600.00	
Commercial expenses	8.65	
General administration—		
General office salaries.....	144.59	
General office supplies and expenses.....	82.61	
General law expenses.....	7.41	
Total	\$234.61	
Insurance	25.00	
Total operating expenses.....	\$2,108.25	
Taxes	80.00	
Total revenue deductions.....		2,188.25
Gross operating income.....		\$494.96
Non-operating revenue:		
Interest		46.33
Net income		\$541.29
Surplus at beginning of year.....		2,909.75
Total surplus		\$3,451.04
Dividends		292.50
Surplus at close of year.....		\$3,158.54

WIRE PLANT AND SERVICE DATA.

	Be- ginning of year.	Added during year.	Dis- continued during year.	Close of year.
Wire plant:				
Metallic circuits—				
Miles of poles	50	2	..	52
Miles of iron wire.....	200	..	..	204
Service:				
Pay stations	3	..	..	3
Rural:				
Rural or farm line.....	166	19	11	174
Extension stations, all kinds.....	3	..	..	3

WEST HOPKINTON TELEPHONE COMPANY.

CONTOOCCOOK, N. H.

PRINCIPAL OFFICERS.

President and General Manager, C. S. Rowell; Clerk, Joseph W. Hazeltine, Contoocook, N. H.; Treasurer, Frank H. Carr, West Hopkinton, N. H.; Auditors, J. W. Hazeltine, A. M. Duston, T. W. Page, Contoocook, N. H.

DIRECTORS.

C. S. Rowell, Contoocook, N. H.; F. H. Carr, West Hopkinton, N. H.; James G. Rice, Orrin F. Fuller, Geo. M. Putnam, H. J. Davis, A. C. Kimball, Contoocook, N. H.

HISTORY.

Incorporated July 31, 1903, under the general laws of the State of New Hampshire. Amended: February 21, 1907; August 27, 1912. On January 17, 1907, the stock of the Hopkinton Tel. Co., was taken in exchange for stock in West Hopkinton Tel. Co. at par.

LOCALITIES SERVED.

Hopkinton, Webster and Warner.

CAPITAL STOCK.

Common, authorized, 160 shares, par value \$25 each.	
Outstanding, 148 shares, par value.....	\$3,700.00
Dividends declared and paid during year, 6%.....	222.00
Number of stockholders, 25; number in New Hampshire, 24.	
Par value of stock held in New Hampshire.....	3,5550.00

BALANCE SHEET.

Assets.

Cost of plant	\$4,278.10
Cash	300.00
Materials and supplies.....	272.00
Total	\$4,850.10

Liabilities.

Capital stock	\$3,700.00
Profit	1,150.10
Total	\$4,850.10

INCOME ACCOUNT.

Operating revenues:		
Earnings from subscribers.....	\$3,426.44	
Other earnings	51.35	
Total operating revenues.....		\$3,477.79
Operating expenses:		
Labor expense	\$1,175.90	
Materials and other expense.....	1,500.46	
Taxes	80.00	
Total operating expenses.....		\$2,756.36
Net earnings		\$721.43
Dividends		222.00
Profit for year.....		\$499.43

WIRE PLANT AND SERVICE DATA.

Wire plant:

Metallic circuits.

Miles of poles, 38; miles of iron wire, 196.

Feet of cable, 700.

Service:

Subscribers, village, 3; rural, 198; total, 201.

CENTRAL OFFICE DATA.

Number of central offices in operating system: 1.

Character of switchboards: magneto.

Total number of lines connected at switchboard: 25.

Ultimate capacity in number of lines of switchboard: 50.

Average number of operator hours employed per day: 15.

WHITE MOUNTAIN TELEPHONE AND TELEGRAPH CO.

PLYMOUTH, N. H.

PRINCIPAL OFFICERS.

President, Allen Hollis, Concord, N. H.; Vice-President, Fred W. Story, Boston, Mass.; Clerk, Alvin F. Wentworth; Treasurer, D. B. Keniston, Plymouth, N. H.; Auditor, Edmund W. Longley, Boston, Mass.; General Manager, John Gadd, Plymouth, N. H.; Chairman Board of Directors, Fred W. Story, Secretary Board of Directors, Carl F. A. Siedhof, Boston, Mass.

DIRECTORS.

Charles J. Ayer, Plymouth, N. H.; Nelson Bailey, Wells River, Vt.; Ora A. Brown, Ashland, N. H.; William R. Driver, Jr., Milton, Mass.; Fred C. Gleason, Warren, N. H.; Henry W. Herbert, Rumney, N. H.; Allen Hollis, Concord, N. H.; Matt B. Jones, Newton, Mass.; Jasper N. Keller, Surry, N. H.; Fred W. Story, Laconia, N. H.; Lambert N. Whitney, Newton, Mass.

HISTORY.

Incorporated April 5, 1907, under special law of the State of New Hampshire. Stock was issued in payment of plant of Pike Telephone Co., Plymouth and Campton Tel. Exchange Co., and the plant of the New England Tel. and Tel. Co., located at Bath and Haverhill, N. H., and Bradford, Groton, Newbury and Ryegate, Vt. The first two named companies are not now doing business. During the year ending June 30, 1912, stock was issued and cash paid for the property of the Woodsville Tel. Co., and the Bakers River Tel. Co. A portion of the plant of the Woodsville Company was sold to the Coös Telephone Company as authorized by Order No. 30 of the Public Service Commission of New Hampshire.

LOCALITIES SERVED.

Ashland, Bath, Benton, Bethlehem,* Bridgewater, Campton, Center Harbor, Dorchester, Easton, Franconia, Groton, Haverhill, Holderness, Lincoln, Lisbon, Littleton,* Meredith,* New Hampton, Piermont, Plymouth, Rumney, Sandwich, Thornton, Warren, Waterville, Wentworth and Woodstock.

CAPITAL STOCK.

Common, authorized, 4,920 shares.

Outstanding: 4,920 shares, par value \$25 each, total.....	\$123,000.00
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Preferred, authorized and outstanding:

705 shares, par value \$25 each, total.....	17,625.00
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Dividends declared and paid during year:

Common, none; preferred, 5%, total.....	880.60
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Number of stockholders, 205; number in New Hampshire, 194.

Par value of stock held in New Hampshire.....	87,162.50
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*Toll lines only.

BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$40.85	
Bills receivable (notes)	2.00	
Accounts receivable:		
From system corporations	720.46	
From subscribers and agents	8,847.91	
Miscellaneous accounts receivable	2,398.45	
		\$12,009.67
Materials and supplies		10,700.00
Fixed capital		167,968.33
Prepayments		250.83
Total		\$190,928.83

Liabilities.

Current liabilities:		
Taxes accrued	\$1,018.36	
Interest accrued on unfunded debt	100.00	
Unearned revenue	1.98	
Accounts payable:		
Accounts with system corporations	2,743.57	
Audited vouchers and wages unpaid	90.37	
Bills payable	24,000.00	
		\$27,954.28
Reserve for depreciation		16,981.88
Optional reserves		797.38
Capital stock—common		123,000.00
Capital stock—preferred		17,625.00
Surplus		4,570.29
Total		\$190,928.83

FIXED CAPITAL.

Buildings	\$15.00
Equipment, exchange and toll lines	163,203.73
Office furniture, tools and vehicles	3,753.65
Total	\$166,972.38

INCOME ACCOUNT.

Operating revenues:		
Exchange—		
Subscribers' stations	\$35,349.14	
Public pay stations	440.96	
Miscellaneous exchange revenue	328.47	
Total		\$36,118.57
Toll—		
Message tolls	\$13,422.22	
Miscellaneous toll revenue	253.20	
Messenger service	5.69	
Telegraph commissions	77.38	
Other telegraph service charges	10.75	
Other miscellaneous revenue	19.95	
Total		13,789.19
Total operating revenues		\$49,907.76

Operating expenses:

Maintenance—

Supervision of maintenance.....	\$75.80
Repairs of wire plant.....	4,580.50
Repairs of equipment.....	2,041.54
Repairs of buildings and grounds.....	2.59
Station removals and changes.....	311.26
Depreciation of plant and equipment.....	12,391.42
Repairs charged to reserves.....	1,587.61

Total \$17,815.50

Traffic—

Central office superintendence.....	\$101.49
Operators' wages	9,311.70
Central office supplies and expenses.....	1,484.44
Pay station expenses.....	41.71
Other traffic expenses.....	57.84

Total \$10,996.68

Commercial—

Commercial administration	\$243.37
Promotion expenses	688.31
Collection expenses	3,156.35
Other commercial expenses.....	1.05

Total \$4,089.08

General administration—

General office salaries.....	\$2,422.08
General office supplies and expenses.....	558.29
Rent for conduit poles and other supports	1,130.86
Rent for lease of telephone plant.....	688.97
Rent of instruments and equipment.....	571.60
Rent of telephone offices	1,323.62
General law expenses.....	17.88
Accidents and damages.....	3.00
Miscellaneous general expenses.....	721.69
Relief department and pensions	236.67

Total \$7,674.66

Insurance 486.74

Total operating expenses \$41,062.66

Taxes 2,084.62

Uncollectible bills 1,437.33

Total revenue deductions \$44,584.61

Gross operating income \$5,323.15

Non-operating revenue:

Interest revenue 14.74

Gross income \$5,337.89

Deductions from gross income:

Interest on unfunded debt..... 1,458.80

Net income \$3,879.09

Surplus at beginning of year..... 1,406.79

Total surplus \$5,285.88

Net adjustments during year..... 165.01

Adjusted balance (surplus)..... \$5,450.89

Dividends 880.60

Surplus at close of year..... \$4,570.29

CENTRAL OFFICE DATA.

Exchange.	Switch-board	Lines connected.				Capacity installed	Ultimate capacity
		Local	Rural	Toll	Total		
Ashland	m.*	50	20	9	79	100	200
Franconia	m.	14	5	5	24	30	50
Campton	m.	12	9	4	25		100
No. Woodstock....	m.	23	10	4	37	45	50
Pike	m.	10	13	6	29	50	200
Plymouth	m.	115	13	16	144	170	800
Rumney	m.	12	8	3	23	30	100
Warren	m.	10	6	3	19	25	150
Woodsville	m.	115	13	23	151	240	800
		361	97	73	531	720	2,450

WIRE PLANT AND SERVICE DATA.

	Beginning of year.	Added during year.	Discontinued during year.	Close of year.
Wire plant (N. H.):				
Metallic circuits.				
Miles of poles.....	439.7	16.	73.1	382.6
Miles of iron wire.....	2,391.	70.	373.2	2,087.8
Miles of copper wire.....	345.3	116.2	24.	437.5
Feet of cable.....	18,220.	9,404.	992.	26,632.
Service:				
City or village:				
One party, business.....	38			44
One party, residence.....	22			25
Two party, business.....	64			88
Two party, residence.....	42			48
Six party or more, business	360			347
Six party or more, residence	760			801
Pay stations	44			43
Total local stations.....	1,330			1,396
Rural:		474	367	
Rural or farm line, business	45			46
Rural or farm line, residence	472			491
Total rural stations....	517			537
Total local and rural...	1,847			1,933
Extension stations, all kinds...	55			74
Private branch exch. stations..	51			52
Official stations	11			12
	1,964	474	367	2,071

WILTON TELEPHONE COMPANY.

WILTON, N. H.

PRINCIPAL OFFICERS.

President, George E. Bales; Clerk, William H. Emerson; Auditors, J. T. Frye and S. H. Abbott; General Manager, H. L. Emerson, Wilton, N. H.

DIRECTORS.

George E. Bales, Henry L. Emerson, William I. Durgin, Fred W. Clark, Joshua T. Frye, Wilton, N. H.

m*—magneto.

HISTORY.

Incorporated May 22, 1900, under the general laws of the State of New Hampshire. Amended: August 25, 1900; April 4, 1901; July 3, 1902.

LOCALITIES SERVED.

Wilton, Lyndeborough, Temple and Milford.

CAPITAL STOCK.

Common, authorized and outstanding:	
100 shares, par value \$100 each.....	\$10,000.00
Dividends declared and paid during year, 19%.....	1,900.00
Number of stockholders, 12; number in New Hampshire, 11.	

BALANCE SHEET.

Assets.

Cash	\$276.31
Accounts receivable	1,590.89
Fixed capital	12,672.65
Total	\$14,539.85

Liabilities.

Accounts payable	\$403.35
Capital stock	10,000.00
Surplus	4,136.50
Total	\$14,539.85

FIXED CAPITAL.

Central office equipment.....	\$250.00
Subscribers' station equipment.....	2,200.00
Exchange lines:	
Pole lines }	
Aerial wire }	10,222.65
Total cost of fixed capital.....	\$12,672.65

INCOME ACCOUNT.

Operating revenues:	
Subscribers' stations }	
Public pay stations }	\$3,855.04
Telephone commissions	941.76
Total operating revenues.....	\$4,796.80
Operating expenses:	
Maintenance	\$1,149.94
Traffic—	
Operators' wages	\$796.40
Central office supplies and expenses....	122.00
Other traffic expenses.....	182.13
Total	\$1,100.53
General administration	53.00
Insurance	26.97
Total operating expenses.....	\$2,330.44
Taxes	339.65
Total revenue deductions.....	\$2,670.09
Net income	\$2,126.71
Dividends	1,900.00
Profit for year.....	\$226.71

WIRE PLANT AND SERVICE DATA.

Wire plant:

Metallic circuits.

Miles of poles, 40½; miles of iron wire, 250.

Service:

Subscribers, city residence.....	4
Pay stations	1
Rural or farm line.....	210
Total local or rural.....	215

WINNEPESAUKEE TELEPHONE COMPANY.

LACONIA, N. H.

LOCATION OF OFFICE.

50 Oliver Street, Boston, Mass.

PRINCIPAL OFFICERS.

President, Fred W. Story, Boston, Mass.; Vice-President, C. W. Vaughan; Clerk, S. S. Jewett, Laconia, N. H.; Treasurer, Edmund S. Willard; Auditor, Edmund W. Longley, Boston, Mass.; General Manager, Henry T. Turner, Laconia, N. H.; Secretary Board of Directors, Carl F. A. Siedhof, Boston, Mass.

DIRECTORS.

Charles W. Adams, Franklin, N. H.; George H. Dresser, Somerville, Mass.; William R. Driver, Jr., Milton, Mass.; Matt B. Jones, Newton, Mass.; Jasper N. Keller, Surry, N. H.; William F. Knight; Fred W. Story; Charles W. Vaughan, Laconia, N. H.; Lambert N. Whitney, Newton, Mass.

HISTORY.

Incorporated March 22, 1909, under the general laws of the State of New Hampshire.

Stock was issued in payment of plant of New England Telephone and Telegraph Company located at Alexandria, Alton, Andover, Barnstead, Belmont, Bristol, Canterbury, Center Harbor, Danbury, Franklin, Gilmanton, Gilford, Hebron, Hill, Laconia, Loudon, Meredith, Moultonborough, New Durham, New Hampton, Northfield, Salisbury, Sanbornton, Sandwich, Tamworth, Tilton and Wilmot, N. H., and in 1911 cash was paid for plant of B. I. White (Bristol Telephone Co.) located at Alexandria, Bridgewater, Bristol, Hebron and New Hampton, N. H.

LOCALITIES SERVED.

Alexandria, Alton, Andover, Belmont, Bridgewater, Bristol, Center Harbor,* Danbury, Franklin, Gilford, Gilmanton, Hebron, Hill, Laconia, Loudon, Meredith,* Moultonboro, New Hampton, Northfield, Salisbury, Sanbornton, Sandwich, Tamworth,* Tilton, and Wilmot.

CAPITAL STOCK.

Common, authorized and outstanding:

8,000 shares, par value \$25 each, total..... \$200,000.00

Dividends declared during year, none.

Number of stockholders, 13; number in New Hampshire, 6.

Par value of stock held in New Hampshire..... 50,100.00

*Toll lines only.

BALANCE SHEET.

Assets.

Cash and current assets:

Accounts receivable:		
From system corporations.....	\$516.71	
From subscribers and agents.....	6,197.00	
Miscellaneous accounts receivable.....	8,905.63	
		\$15,619.34
Materials and supplies.....		2,931.00
Investments		500.00
Fixed capital		259,922.17
Prepayments		97.05
Total		\$279,069.56

Liabilities.

Current liabilities:

Taxes accrued	\$1,798.26	
Unearned revenue	146.88	
Accounts payable:		
Accounts with system corporations.....	3,958.70	
Audited vouchers and wages unpaid....	16.09	
Bills payable	28,758.09	
		\$34,678.02
Reserve for depreciation.....		35,992.38
Optional reserves		1,123.35
Capital stock		200,000.00
Surplus		7,275.81
Total		\$279,069.56

INVESTMENTS.

Laconia Hotel Company:

20 shares stock, par value, cost and book value.....	\$500.00
Income accrued during year, none.	

INCOME ACCOUNT.

Operating revenues:

Exchange—		
Subscribers' stations	\$39,758.91	
Public pay stations.....	685.65	
Miscellaneous exchange revenue.....	2,338.83	
Total		\$42,783.39

Toll—

Message tolls	\$12,308.10	
Miscellaneous toll revenue.....	14.05	
Telegraph commissions	60.86	
Other telegraph service charges.....	31.65	
Total		12,414.66
Total operating revenues.....		\$55,198.05

Operating expenses:

Maintenance—

Supervision of maintenance.....	\$192.82	
Repairs of wire plant.....	4,651.88	
Repairs of equipment.....	1,456.74	
Repairs of buildings and grounds.....	13.36	
Station removals and changes.....	1,071.33	
Depreciation of plant and equipment....	17,615.99	
Other maintenance expenses.....	3.45	
Repairs charged to reserves.....	1,025.24	
Total		\$23,980.33

Traffic—		
Central office superintendence.....	\$134.02	
Operators' wages	12,136.75	
Central office supplies and expenses....	2,407.41	
Pay station expenses.....	23.07	
Other traffic expenses.....	18.53	
Total	\$14,719.78	
Commercial—		
Commercial administration	\$197.42	
Promotion expenses	1,474.14	
Collection expenses	3,577.76	
Directory expenses	83.55	
Total	\$5,332.87	
General administration—		
General office salaries	\$1,872.33	
General office supplies and expenses....	513.99	
Rent for conduit, pole and other supports	427.00	
Rent of instruments and equipment....	2,289.58	
Rent for telephone offices.....	1,168.92	
General law expenses.....	154.31	
Accidents and damages.....	12.75	
Miscellaneous general expenses.....	214.74	
Relief department and pensions.....	293.95	
Total	\$6,947.57	
Insurance	635.15	
Total operating expenses.....	\$51,615.70	
Taxes	3,448.28	
Uncollectible bills	529.60	
Total revenue deductions.....		\$55,593.58
Gross operating loss.....		\$395.53
Net non-operating revenue.....		305.60
Gross loss		\$89.93
Total deductions from gross income.....		1,957.85
Net loss		\$2,047.78
Surplus at beginning of year.....		9,323.59
Surplus at close of year.....		\$7,275.81

CENTRAL OFFICE DATA.

Exchange.	Lines Connected.				Ca- pacity in- stalled.	Ulti- mate ca- pacity.
	Local.	Rural.	Toll.	Total.		
Belmont, N. H.....	3	13	4	20	40	100
Bristol, N. H.....	38	9	2	49	90	800
Franklin, N. H.....	203	14	16	233	450	800
Laconia, N. H.....	406	23	35	464	690	800
Tilton, N. H.....	65	1	8	74	120	800
Switchboard—magneto.						

WIRE PLANT AND SERVICE DATA.

	Beginning of year.	Added during year.	Discontinued during year.	Close of year.
Wire plant (New Hampshire)				
Miles of poles installed...	321.25	6.3	111.25	216.3
Miles of iron wire installed	1,816.3	63.6	245.3	1,634.6
Miles of copper wire installed	1,715.8	159.8	...	1,875.6
Feet of cable installed.....	105,412	665	...	106,077
Metallic circuits.				

Service:

City or village—

One-party, business.....	57			77
One-party, residence.....	45			62
Two-party, business.....	101			125
Two-party, residence.....	152			201
Four-party, business.....	243			216
Six-party, business.....	....			....
Six-party, residence.....	717			743
Pay stations.....	74			78

Total local stations....	1,389			1,502
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Rural—

Rural or farm line, business.....	14	548	352	16
Rural or farm line, residence.....	474			501

Total rural stations....	488			517
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Total local and rural....	1,877			2,019
Extension stations, all kinds.....	102			105
Private branch exchange stations.....	137			186
Official stations.....	21			22
Receiving stations.....	1			2

2,138	548	352	2,334
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TELEPHONE ELEC

	Capital stock outstanding.	Funded debt outstanding.	Fixed capital— all departments.
Ammonoosuc Telephone Co.....	\$1,125.00	.....	\$1,125.00
Annett Tel. Line	518.75*	.....	500.00
Barrington & Strafford Tel. Co.....	250.00*	.....	250.00
Bradford Tel. & Tel. Co.....	6,000.00*	.....	6,000.00
Canterbury & Boscawen Tel. Co....	4,025.00	.....	9,694.73
Chester & Derry Tel. & Tel. Co....	1,500.00	.....	1,853.80
Chichester Tel. Co.....	2,100.00	.....	2,944.24
Citizens Tel. Co.....	100,000.00	.....	120,855.86
Cold River Tel. Co.....	1,650.00	.....	2,300.00*
Contoocook Valley Tel. Co.....	4,000.00	.....	7,000.00
Coös Tel. Co.....	153,000.00	.....	252,431.73
Cornish Flat Tel. Co.....	435.00	.....	479.00*
Dunbarton Tel. Co.....	1,800.00	.....	3,438.40
Errol Hill Tel. Co.....	600.00*	.....	600.00*
Etna Tel. Co.....	500.00*	.....	550.00
Etna & Hanover Ctr. Tel. Co.....	1,100.00	.....	1,100.00*
Fairlee Tel. Co.....	7,500.00*	.....	10,942.86
Fairlee & Wentworth Tel. Co.....	600.00	.....	600.00
Fairmount Tel. Co.....	300.00	.....	300.00
Forest Lake Tel. Co.....	272.01*	.....	272.01
Grafton Tel. Co.....	260.74*	.....	260.74
Henniker Tel. Co.....	6,500.00	.....	6,616.37*
Hollis Tel. Co.....	3,350.00*	.....	3,280.00
Hudson Ctr. & W. Windham Tel. Co.	1,000.00	.....	1,000.00
Jefferson Tel. Co.....	1,000.00	.....	2,730.00
Kearsarge Tel. Co.....	11,850.00	.....	14,271.00
Lake Morey Tel. & Tel. Co.....	1,560.00	.....	1,560.00*
Lempster Tel. Co.....	1,108.41*	.....	1,500.00
Livermore Tel. Co.....	216.18	.....	216.18
Lyme Peoples Tel. Co.....	830.00	.....	1,325.20
Madison Local Tel. Co.....	900.00	.....	2,043.55
Martin, Leon H.....	75.00*	.....	75.00
Mascoma Valley Tel. Co.....	36,000.00	.....	45,984.64
Meredith Tel. Co.....	1,000.00	.....	19,027.52
Meriden Tel. Co.....	1,000.00*	.....	1,000.00
Merrill, Chas. H.....	400.00	.....	400.00
Merrimack County Tel. Co.....	3,625.00	.....	5,086.00
New Boston & Frankestown Tel. Co..	900.00	.....	1,600.00
New England Tel. & Tel. Co.....	43,185,300.00	\$12,361,000.00	65,651,487.02
North Conway & Jackson Tel. Co..	5,000.00	4,000.00	8,073.84
Nottingham Tel. Co.....	720.00	.....	720.00
Ossipee Valley Tel. & Tel. Co.....	53,375.00	.....	118,397.09
Passumpsic Tel. Co.....	267,125.00	.....	376,549.67
Pelham Tel. Assn.....	.....	.....	.....
Piermont Tel. Co.....	3,000.00*	.....	3,000.00
Pine River Tel. Co.....	550.00*	.....	550.00
Sandown Tel. Co.....	700.00	.....	1,107.16
Sandwich Local Tel. Co.....	7,000.00	.....	7,756.53
Shoals Cable Co.....	50,000.00	.....	36,500.00*
Southern Coös Tel. Co.....	4,575.00	.....	6,960.70
Sugar River Valley Tel. Co.....	1,535.00	.....	1,560.00
Sunapee Tel. Co.....	4,000.00	.....	3,325.00
Union Tel. Co.....	6,000.00	.....	10,422.64
Wakefield Tel. Co.....	1,000.00	.....	1,000.00
Walbridge, F. L.....	1,027.75*	.....	777.75
Washington & Cherry Valley Tel. Co.....	2,600.00*	.....	2,772.14
Weare Tel. Co.....	3,000.00	.....	5,816.68
West Hopkinton Tel. Co.....	3,700.00	.....	4,278.10
White Mountain Tel. & Tel. Co....	140,625.00	.....	167,968.33
Wilton Tel. Co.....	10,000.00	.....	12,672.65
Winnepesaukee Tel. Co.....	200,000.00	.....	259,922.17
Total	\$44,309,683.84	\$12,365,000.00	\$67,212,831.30

*Capital invested.

(a) Dividends declared, \$220.81.

TRIC UTILITIES

Cash and current assets excluding materials and supplies.	Current liabilities.	Total operating revenues.	Total operating expenses.	Operating ratio.	Dividends declared. %
\$325.24	\$101.70	\$377.00	\$316.10	83	....
15.00	23.46	127.12	79.18	61	....
.....	.....	4.80	4.80	...	....
200.00	.....	1,400.00	800.00	57	....
1,008.28	3,016.35	2,229.66	1,325.50	59	6
102.73	84.20	710.85	747.76	105	....
521.43	50.00	1,248.76	1,095.23	87	6
4,714.07	4,000.00	30,942.99	22,528.31	72	4
.....	.....	760.78	478.44	62	20.35
500.00	500.00	8,100.00	6,150.00	75	....
18,693.11	95,399.32	88,757.78	73,280.50	82	7
11.20	.....	5,520.00	4,400.00	79	....
214.78	250.00	1,320.76	622.66	47	9 ¼
39.57	45.01	38.84	35.80	92	....
113.34	627.34	404.75	400.58	98	....
78.05	.....	346.00	303.07	87	5
442.95	52.18	4,380.60	3,675.25	83	....
81.32	.....	139.00	113.93	81	....
105.14	46.40	322.93	300.43	93	10
.....
.....	.....	93.07	71.17	76	....
1,000.20	.....	2,171.10	2,021.59	92	5
391.25	350.00	2,299.78	1,920.00	83	....
85.75	.....	552.00	502.50	91	....
512.18	.....	2,224.21	1,886.76	84	....
2,167.66	1,089.62	7,376.30	6,686.60	90	....
412.00	750.00	1,324.30	1,364.44	103	....
611.61	72.00	939.00	718.19	76	(a)
.....	.....	216.18	188.54	87	....
375.00	296.34	1,170.00	982.00	83	22
367.21	377.69	1,337.53	841.12	62	....
.....	.....	34.50	18.10	52	....
12,019.19	1,238.84	18,680.40	13,875.47	74	7
1,371.94	17,119.21	6,801.46	7,081.77	104	6
105.00	66.05	942.05	828.05	87	....
.....	.....	11.00	16.00	145	....
1,429.57	1,131.00	3,602.70	3,117.16	86	....
128.27	175.00	421.19	249.13	59	....
3,139,419.01	1,976,973.02	17,832,576.87	14,367,292.39	85	7
1,133.36	3,249.09	4,612.60	3,895.36	84	5
215.00	.....	117.18	81.21	69	....
7,229.93	44,671.07	30,738.37	26,452.87	86	4 ½
26,178.44	152,121.16	115,188.46	110,036.44	85	....
.....	.....	248.92	311.61	125	....
.....	.....	1,200.00	1,021.00	85	....
234.00	54.85	234.00	232.85	...	....
718.09	451.14	592.54	453.13	76	....
809.66	.....	2,824.53	1,779.15	62	....
17,000.00	3,568.50	54.00	122.50	226	....
381.93	2,820.81	1,071.84	964.02	89	....
1,027.29	826.17	1,461.74	1,359.95	93	5
1,925.00	1,425.00	4,655.00	4,209.00	94	....
1,580.15	1,187.96	4,971.47	3,287.56	66	6
662.40	.....	2,905.61	2,458.82	84	10
225.80	.....	703.00	477.20	67	....
.....	.....	2,663.11	1,260.19	47	....
1,885.69	250.35	2,683.21	2,188.25	79	10
300.00	.....	3,477.79	2,756.36	79	6
12,009.67	27,954.28	49,907.76	44,584.61	89	5
1,867.20	403.35	4,796.80	2,670.09	55	19
15,619.34	34,678.02	55,198.05	55,593.58	107	....
\$3,278,565.00	\$2,377,496.48	\$18,320,558.24	\$14,792,514.27	...	....

PART IX.

REPORTS OF TOLL BRIDGES

For The Year Ending June 30, 1914.

ATLANTIC SHORE RAILWAY.

(See ELIOT TOLL BRIDGE.)

BEDELL BRIDGE CORPORATION.

HAVERHILL, N. H.

PRINCIPAL OFFICERS.

Clerk and Treasurer, M. H. Randall, Haverhill, N. H.

DIRECTORS.

J. J. Smith, South Newbury, Vt.; E. C. Durgan, Bradford, Vt.; F. G. Cline, South Newbury, Vt.

HISTORY.

Bridge is located between Haverhill, N. H., and South Newbury, Vt. It was first placed in service in 1868.

BALANCE SHEET.

Assets.

Cost of plant.....	\$7,846.05
Cash	378.56
Total	\$8,224.61

Liabilities.

Capital stock	\$8,000.00
Profit	224.61
Total	\$8,224.61

INCOME ACCOUNT.

Operating revenues	\$714.82
Operating expenses:	
Labor expense	\$116.08
Repairs to bridge.....	391.88
Taxes	37.87
Total operating expenses.....	545.83
Profit for year.....	\$168.99
Profit at beginning of year.....	55.62
Profit at close of year.....	\$224.61

STATISTICAL DATA.

Bridge was closed July 7, 1914.
Length of bridge: 384 feet.
Number of feet of roadway: 18 feet.
Number of spans: 2.
Description of bridge structure: wood.
Description of approaches to bridge abutments: planking.
Estimated capacity: 10,000 pounds and upwards.
Number of employees: 1 toll gatherer.

BOSTON & MAINE RAILROAD.

(See DOVER POINT TOLL BRIDGE.)
(See PORTSMOUTH BRIDGE.)
(See WOODSVILLE BRIDGE.)

CHESHIRE BRIDGE CORPORATION.

SPRINGFIELD, VT.

PRINCIPAL OFFICERS.

President, Edward C. Crosby, Brattleboro, Vt.; Treasurer, A. J. Crosby, Springfield, Vt.

DIRECTORS.

Edward C. Crosby, Brattleboro, Vt.; M. A. Coolidge, Fitchburg, Mass.; W. W. Brown, A. J. Crosby, H. H. Blanchard, Springfield, Vt.

LOCATION.

This bridge crosses the Connecticut River, between Springfield, Vt., and Charlestown, N. H.

HISTORY.

New bridge first placed into service in 1896.

BALANCE SHEET.

Assets.

Cost of plant.....	\$50,000.00
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Liabilities.

Capital stock	\$12,000.00
Profit	38,000.00
Total	\$50,000.00

INCOME ACCOUNT.

Operating revenues	\$1,783.53
Operating expenses:	
Labor expense (except repairs).....	\$180.00
Repairs to bridge (both labor and materials)	533.38
Taxes	644.10
Total operating expenses.....	1,357.48
Net earnings	\$426.05

STATISTICAL DATA.

Bridge is open to traffic all year. Length of bridge, 500 feet
Number of feet of roadway: 19 (11 to the track); three spans; bridge structure is of steel. Approaches to bridge abutments, filled roadway.
Estimated capacity, 75 to 100 tons.
Number of employees, 1 bridge toll gatherer.

CORNISH BRIDGE, PROPRIETORS OF.

CORNISH, N. H., AND WINDSOR, VT.

PRINCIPAL OFFICERS.

Treasurer, Henry S. Wardner; Agent, A. K. Hall; Clerk, W. W. Balloch, Windsor, Vt. (Clerk has his office in Cornish, N. H.)

DIRECTORS.

Richard M. Hall, Henry S. Wardner, (Miss) Margaret A. Evarts, Windsor, Vt.

HISTORY.

Bridge is located across Connecticut River between Cornish, N. H., and Windsor, Vt. The first bridge was placed in service in October, 1796; present bridge (the fourth) placed in service in 1866.

INCOME ACCOUNT.

Operating revenues:		
Toll bridge earnings.....	\$2,494.90	
Other earnings	405.98	
Total operating revenues.....		\$2,900.88
Operating expenses:		
Repairs to bridge.....	\$1,121.67	
Taxes	214.55	
Total operating expenses.....		1,336.22
Net earnings.....		\$1,564.66
Dividends declared		1,000.00
Profit at close of year.....		\$564.66

STATISTICAL DATA.

Period of year during which bridge is open to traffic: all the year.

Length of bridge: 468 feet.

Number of feet of roadway: 19 feet, 6 inches, except at portals and over pier, where width is slightly diminished by wind-braces.

Number of spans: 2.

Description of bridge structure: Wooden lattice bridge.

Description of approaches to bridge abutments, etc.: Dirt roads, fenced, and with slight grades leading up to bridge. At the western approach on

Vermont soil is a portculis, which may be lowered by the toll-gatherer.

Number of employees: 1 toll-gatherer and the officers herein mentioned.

DOVER POINT TOLL BRIDGE.

(Operated by BOSTON & MAINE RAILROAD.)

DIRECTORS.

(See Boston & Maine Railroad—Steam Road.)

PRINCIPAL OFFICERS.

(See Boston & Maine Railroad—Steam Road.)

LOCATION.

This bridge is over the Piscataqua River, between Dover Point, N. H., and Newington, N. H. Its cost is unknown, having been included as a part of the construction account of the Portsmouth & Dover Railroad, which was afterwards acquired by the Boston & Maine Railroad.

INCOME ACCOUNT.

Operating revenues:		
Tolls		\$4,301.22
Operating expenses:		
Maintenance	\$1,498.55	
Running expenses	887.22	
Total operating expenses.....		2,385.77
Net revenue		\$1,915.45

ELIOT TOLL-BRIDGE.

(Operated by ATLANTIC SHORE RAILWAY.)

KENNEBUNK, ME.

PRINCIPAL OFFICERS.

President, Frederick O. Conant, Portland, Me.; Vice-President, Louis B. Goodall, Sanford, Me.; Treasurer, Constant Southworth, Portland, Me.; Assistant Treasurer, Sterling T. Dow; Auditor, J. W. Leavitt; General Manager, L. H. McCray, Kennebunk, Me.

DIRECTORS.

Fred J. Allen, Sanford, Me.; William Binney, Jr., Providence, R. I.; Arthur S. Bosworth, Portland, Me.; Roland H. Boutwell, Exeter, N. H.; Frederick O. Conant, Charles Sumner Cook, Ernest J. Eddy, Portland, Me.; George B. Goodall, Louis B. Goodall, Sanford, Me.; E. Burton Hart, New York City; George S. Hobbs, Portland, Me.; Julian S. Jones, Baltimore, Md.; John E. Liggett, Augusta, Me.; Charles H. Prescott, Biddeford, Me.; Constant Southworth, George H. Weeks, Portland, Me.

LOCATION.

This bridge crosses Salmon Falls River between Dover, N. H., and South Berwick, Me.

BALANCE SHEET.

Resources and liabilities of toll bridge property have never been segregated from those of railway property.

INCOME ACCOUNT.

Operating revenues		\$1,730.41
Operating expenses:		
Labor expense	\$405.29	
Materials and other expense.....	62.50	
Repairs to bridge.....	1,070.08	
Taxes	3.50	
Total operating expenses.....		1,541.37
Net earnings		\$189.04

STATISTICAL DATA.

Bridge is open to traffic all year. Length of bridge, 610.20'.
 Number of feet of roadway, 19½; track included, and planked; one span.
 Bridge structure is of wood. Approaches to bridge abutments, stone and
 dirt. Estimated capacity: Loads, roadway, 80 lbs.; per square foot of
 roadway, 8 tons on two axles; 10 feet c to c—5' gauge.
 Number of employees, 1.

HAMPTON RIVER BRIDGE.

(Owned and operated as part of the MASSACHUSETTS NORTHEASTERN
 STREET RAILWAY COMPANY, Haverhill, Mass.)

HAVERHILL, MASS.

PRINCIPAL OFFICERS.

President, David A. Belden; Treasurer, Samuel P. Russell, Haverhill,
 Mass.

LOCATION.

This bridge crosses Hampton Harbor, so-called, a bay formed by the
 Black Water River and the Hampton River. It is 4,619 feet in length,
 and is located between Seabrook and Hampton, passing through a portion
 of Hampton Falls.

HISTORY.

Organized December 5, 1900.

Incorporated under general laws of the State of New Hampshire.

By order No. 267 of the Public Service Commission, approval was given
 to the transfer of this property from the Granite State Land Company to
 the Massachusetts Northeastern Street Railway Company for \$75,000.

INCOME ACCOUNT.

Operating revenues:	
Tolls	\$3,658.25
Rental	2,000.00
Total operating revenues.....	\$5,658.25
Operating expenses:	
Toll-keeper's wages and expenses.....	\$308.12
Insurance	240.00
Repairs	1,972.16
Deferred charges	1,250.00
Total operating expenses.....	3,770.28
Net income	\$1,887.97

LYMAN BRIDGE, PROPRIETORS OF.

BARNET, VT., AND MONROE, N. H.

PRINCIPAL OFFICERS.

President, Leonard B. Buchanan; Treasurer and Collector, George S.
 Lewis; Secretary, William T. Crawford, Boston, Mass.; Clerk, Merrill Shurt-
 leff, Lancaster, N. H.

DIRECTORS.

Leonard B. Buchanan, Howard G. Philbrook, Boston, Mass.; Philo B.
 Van Dyke, Barnet, Vt.

HISTORY.

Bridge is located across Connecticut River between Monroe, N. H., and Barnet, Vt. The original bridge was erected about 1803; present bridge erected about 1834.

INCOME ACCOUNT.

Operating revenues:		
Toll bridge earnings.....	\$419.76	
Other earnings	79.67	
	<hr/>	
Total earnings		\$499.43
Operating expenses:		
Labor expense	\$52.00	
Materials and other expense.....	76.09	
Repairs	57.62	
Taxes	15.71	
	<hr/>	
Total expenses		201.42
		<hr/>
Net earnings		\$298.01
Profit at beginning of year.....		1,621.51
		<hr/>
Profit at close of year.....		\$1,919.52

STATISTICAL DATA.

Period during which bridge is open to traffic: all the year.
 Length of bridge: about 250 feet.
 Number of feet of roadway: 18 feet between arches; plank roadway 10 feet wide.
 Number of spans: 2.
 Description of bridge structure: Wooden Howe truss reinforced with packed timber arches, consisting each of 8 pieces of 2½" by 9' plank and one 2" by 9' plank, this arch actually carrying all the load.
 Description of approaches to bridge abutments: Earthen embankments supporting roadway.
 Number of employees: 1 (not including executive officers).

REMARKS.

Unable to give estimate capacity owing to age of bridge and uncertainty of strength of timber. Bridge has been carefully observed under various loads and its behavior justifies conclusion that it is amply able to carry all loads that come upon it.

Until recently the accounts of the company were not kept in such a manner as to show the plant investment, so that it is impossible for the company to give the cost of bridge and appurtenances. The capital stock of the company consists of 100 shares, having no par value.

MASSACHUSETTS NORTHEASTERN STREET RAILWAY COMPANY.

(See HAMPTON RIVER BRIDGE.)

NEWCASTLE BRIDGE, THE PROPRIETORS OF.

(Operated by David Urch, Lessee.)

LOCATION OF CLERK'S OFFICE.

Portsmouth, N. H.

The bridge was operated by the proprietors until December 1, 1876, since which date it has been operated by the lessee.

Bridge located between Portsmouth and Newcastle.

PRINCIPAL OFFICERS.

President, E. E. Tucker, Chelsea, Mass.; Clerk and Treasurer, David Urch, Portsmouth, N. H.

DIRECTORS.

Elmer E. Tucker, Chelsea, Mass.; Ephriam Urch, Newcastle, N. H.; Charles F. Tucker, Portsmouth, N. H.; M. J. Buck, R. A. Spinney, Eliot, Maine.

HISTORY.

Incorporated June 21, 1821, under special law of the State of New Hampshire.

CAPITAL STOCK.

Common, authorized and outstanding, 215 shares, par value \$37.50 each, total.....	\$8,062.50
Dividends declared during year, none.	
Number of stockholders, 6, in New Hampshire 3.	
Par value of stock held in New Hampshire.....	7,837.50

BALANCE SHEET.

Assets.

Cost of structure.....	\$8,062.50
Permanent improvements made by lessor.....	22,371.48
Deficit	1,660.50
Total	\$32,094.48

Liabilities.

Capital stock	\$8,062.50
Due David Urch for improvements.....	22,371.48
Bills payable	1,660.50
Total	\$32,094.48

INCOME ACCOUNT.

Revenue:	
Rental	\$100.00
Deductions:	
Salary of clerk.....	\$50.00
Advertising expense	1.50
Total deductions	51.50
Net income	\$48.50
Deficit at beginning of year.....	1,660.50
Deficit at close of year.....	\$1,612.00

NEWCASTLE BRIDGE.

(DAVID URCH, LESSEE.)

PORTSMOUTH, N. H.

HISTORY.

The structure was leased from The Proprietors of Newcastle Bridge, December 1, 1876.

Terms:

Rental—First six years for \$1,000.00; after that period, \$100.00 per year.

Structure to be kept in repair by lessee, and permanent improvements to be charged to proprietors.

BALANCE SHEET.

<i>Assets.</i>	
Bills receivable:	
Amount due from lessor.....	\$24,031.98
<i>Liabilities.</i>	
Capital invested	\$24,031.98
INCOME ACCOUNT.	
Revenue:	
Receipts from tolls.....	\$5,147.44
Deductions:	
Maintenance	\$800.00
Operators' wages	525.00
Insurance	7.00
Taxes	170.72
Rental	100.00
Lights	9.00
Total deductions	1,611.72
Net earnings	\$3,535.72

NORTHUMBERLAND BRIDGE COMPANY.

NORTHUMBERLAND, N. H.

PRINCIPAL OFFICERS.

President, Frank Hall, Columbia Falls, Me.; Secretary and Director, H. S. Hall; Director, Geo. F. Whitcomb, Guildhall, Vt.

DIRECTORS.

Frank Hall, Columbia Falls, Me.; H. S. Hall, Geo. F. Whitcomb, Guildhall, Vt.

LOCATION.

This bridge crosses the Connecticut River, between Northumberland, N. H., and Guildhall, Vt.

HISTORY.

Bridge first placed in service in 1854.

CAPITAL STOCK.

Capital stock	\$3,800.00
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INCOME ACCOUNT.

Operating revenues	\$323.00
Operating expenses:	
Labor expense	\$50.00
Materials and other expense.....	75.00
Repairs	27.00
	152.00
Net earnings	\$171.00

STATISTICAL DATA.

Bridge is open to traffic all year. Length of bridge, 300 feet. Number of feet of roadway: about 250 feet; two spans; bridge structure is of wood. Approaches to bridge abutments, stone abutments. Estimated capacity, 6 to 8 tons. Number of employees, 1.

PORTSMOUTH BRIDGE.

(Operated by BOSTON & MAINE RAILROAD.)

BOSTON, MASS.

This property has been owned by the Boston & Maine for many years, it having been acquired with the Eastern, Portland, Saco and Portsmouth Railroads, and the original cost of the property is unknown.

PRINCIPAL OFFICERS.

President, Wm. J. Hobbs; Treasurer, Herbert E. Fisher, Boston, Mass.; Clerk, Wallace Hackett, Portsmouth, N. H.

DIRECTORS.

Wm. J. Hobbs, Malden, Mass.; Stephen Decature, Portsmouth, N. H.; Lucius Tuttle,* Boston, Mass.; S. Ellery Jennison, Wallace Hackett, Frederick M. Sise, Flagg F. Grant, Portsmouth, N. H.

HISTORY.

Bridge is located between Portsmouth, N. H., and Kittery, Me.

INCOME ACCOUNT.

Operating revenues		\$18,139.47
Operating expenses:		
Labor expense	\$1,587.64	
Materials and other expense.....	1.50	
Repairs	3,170.69	
Taxes	1,145.10	
Total operating expenses		5,904.93
Net earnings		\$12,234.54
Dividends		12,234.54
Profit at close of year.....		

STATISTICAL DATA.

Period during which bridge is open to traffic; entire year.
Length of bridge: 1,650 ft.
Number of spans: 71 pile trestle spans 10 trusses and 1 draw span.
Description of bridge structure: wood.
Description of approaches to bridge abutments: Masonry abutment north end.
Timber grillage south end.
Estimated capacity: six-ton cart.
Number of employees: 1 toll collector; 1 assistant toll collector.

REMARKS.

Repairs are made by Boston & Maine Railroad.

WOODSVILLE BRIDGE.

(Operated by BOSTON & MAINE RAILROAD.)

WOODSVILLE, N. H., AND WELLS RIVER, VT.

Property owned by Boston & Maine Railroad and Concord and Montreal Railroad jointly. Original cost is unknown.

*Deceased.

PRINCIPAL OFFICERS.

Manager and Director, George E. Cummings; Clerk, James C. Gallagher, Woodsville, N. H.

DIRECTORS.

George E. Cummings, Carrol C. Rinehart, Woodsville, N. H.; John F. Webster, Concord, N. H.

HISTORY.

Bridge is located between Woodsville, N. H., and Wells River, Vt.

INCOME ACCOUNT.

Operating revenues:	
Toll bridge earnings.....	\$3,844.04
Other earnings	120.00
Total operating revenues.....	\$3,964.04
Operating expenses:	
Labor expense	\$592.11
Materials and other expense.....	5.18
Repairs	98.31
Taxes	369.00
Total operating expenses.....	1,064.60
Net earnings	\$2,899.44
Dividends	2,899.44
Profit at close of year.....	.....

STATISTICAL DATA.

Period during which bridge is open to traffic: entire year.

Length of bridge: 333 feet, 5½ inches.

Number of spans: Approaches, 2 span plate girders; main span, 1 span truss.

Description of bridge structure: steel.

Description of approaches to bridge abutments: one deck plate girder approach each end. Masonry abutments.

Estimated capacity: Design figures, 100 pounds per square foot and 10-ton truck.

Number of employees: 1 toll collector.

REMARKS.

Repairs are made by Boston & Maine Railroad.

PART X.

REPORTS OF WATER UTILITIES

For The Year Ending, June 30, 1914.

ALPINE AQUEDUCT COMPANY.

GORHAM, N. H.

PRINCIPAL OFFICERS.

President, General Manager and Superintendent, Wallace Mason; Vice-President, Harry G. Noyes; Clerk and Treasurer, Alfred R. Evans; Auditor, Adna C. Gurney, Gorham, N. H.

DIRECTORS.

Wallace Mason, Adna C. Gurney, Alfred R. Evans, Harry G. Noyes, Murton M. Willis, Guy L. Sharey, Gorham, N. H.

HISTORY.

Incorporated July 1, 1894, under special law of the State of New Hampshire. Amended March 25, 1891.

LOCALITY SERVED.

Gorham, N. H.

CAPITAL STOCK.

Number of stockholders.....	232
Number in New Hampshire.....	170
Par value of capital stock held in New Hampshire.....	\$17,000.00

BALANCE SHEET.

Assets.

Cost of plant.....	\$23,200.00
Cash	1,279.72
Total	\$24,479.72

Liabilities.

Capital stock	\$23,200.00
Surplus	1,279.72
Total	\$24,479.72

INCOME ACCOUNT.

Operating revenues:		
Earnings from commercial sales.....		\$1,605.16
Operating expenses:		
Miscellaneous labor	\$88.10	
Maintenance of source of supply.....	39.71	
Total	\$127.81	
Salaries of general officers and clerks....	\$100.00	
General office rents, supplies and expenses	38.50	
Taxes	60.99	
Total deductions		\$327.30
Net income		\$1,277.86
Surplus at beginning of year.....		929.86
Total surplus		\$2,207.72
Dividends on stock.....		928.00
Surplus at close of year.....		\$1,279.72

MISCELLANEOUS STATISTICS.

Plant constructed in 1873. Larger reservoir built in 1904.
 Source of supply: Seventeen natural springs.
 Method of pumping: None.
 Length of trunk lines: 1 mile.
 Diameter of trunk lines: 4".
 Length of street mains: 1½ miles.
 Diameter of street mains: 3".
 Pressure on mains: 60 pounds.
 Number of connections: Commercial services, 160.
 Number of and capacity of meters: None.

ALTON & ALTON BAY WATER COMPANY.

ALTON, N. H.

PRINCIPAL OFFICERS.

President, F. J. Cushing, Lynn, Mass.; Clerk, Benjamin Thompson, Portland, Me.; Treasurer and General Manager, H. J. Jones, Alton, N. H.

DIRECTORS.

F. J. Cushing, Lynn, Mass.; H. J. Jones, C. H. Downing, G. S. Bassett, Alton, N. H.

HISTORY.

Incorporated 1892 under the laws of the State of Maine.

LOCALITY SERVED.

Alton, N. H.

CAPITAL STOCK.

Capital stock	\$32,000.00
Dividends paid during year, 3½%	1,120.00
Number of stockholders, 40; number in New Hampshire, 34.	
Par value of stock held in New Hampshire	30,170.00

BALANCE SHEET.

Assets.

Cost of plant	\$32,000.00
Cash	350.67
Accounts receivable	1,245.39
Materials and supplies	200.00
Total	\$33,796.06

Liabilities.

Capital stock	\$32,000.00
Bills payable	550.00
Accounts payable	100.00
Dividends payable	1,120.00
Surplus	26.06
Total	\$33,796.06

INCOME ACCOUNT.

Operating revenues:	
Earnings from commercial sales	\$961.17
Earnings from municipal hydrant rentals ..	780.00
Earnings from sales to municipal department	19.00
Total operating revenue	\$1,763.17

Non-operating revenue:	
Profit on merchandise sales (net).....	\$6.32
Miscellaneous non-operating revenue.....	50.00
Total non-operating revenue.....	\$56.32
Total income	\$1,819.49
Operating expenses:	
Pumping—	
Pump labor	\$52.59
Miscellaneous pumping station supplies and expenses	57.00
Total	\$109.59
Distribution—	
Meter and fittings department supplies and expenses	75.00
Total	\$184.59
General administration—	
Salaries of general officers and clerks..	\$75.00
Miscellaneous general expenses.....	50.00
Total	\$125.00
Taxes	360.50
Uncollectible accounts	100.00
Total	\$460.50
Total deductions	770.09
Net income	\$1,049.40
Surplus at beginning of year.....	96.66
Total surplus	\$1,146.06
Dividends	1,120.00
Surplus at close of year.....	\$26.06

MISCELLANEOUS STATISTICS.

Plant constructed in 1892.
 Source of supply: springs.
 Method of pumping: steam.
 Length of trunk lines: 3½ miles
 Diameter of trunk lines: 4", 6", 8".
 Pressure on mains: 100-120 pounds.
 Number of connections: commercial services, 115; hydrants, 26; public buildings, 2.
 Number and capacity of meters: 15; 5-8" and 1".

BAKER & DEARBORN.

PEMBROKE, N. H.

PARTNERS.

Elezar Baker Est. and J. H. Dearborn, Suncook, N. H.

LOCALITY SERVED.

Pembroke.

BALANCE SHEET.

Assets.

Cost of plant.....	\$2,000.00
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Liabilities.

Capital invested	\$2,000.00
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INCOME ACCOUNT.

Operating revenues:	
Total earnings from operation.....	\$435.00
Operating expenses:	
Labor expense	\$100.00
Materials and other expense.....	194.42
Taxes	7.50
Total operating expenses.....	301.92
Profit for year.....	\$133.08

MISCELLANEOUS STATISTICS.

Pumps: 1.
Source of supply: springs and river.
Mains: size, 3"; number of feet in use end of year, 5,000.
Reservoirs: 1.
Services: number at close of year to private consumers, 33.
Consumers: number unmetered, 55.
Method of pumping used: electric.

BATH VILLAGE WATER COMPANY.

BATH, N. H.

PARTNERS.

Myrtie P. Conant and Mabel S. Conant, Bath, N. H.

LOCALITY SERVED.

Bath.

BALANCE SHEET.

Assets.

Cash	\$65.29
Accounts receivable	32.67
Materials and supplies.....	101.40
Property and plant.....	460.50
Sinking fund	100.00
Total	\$759.86

Liabilities.

Capital invested	\$460.50
Sinking fund	100.00
Surplus	199.36
Total	\$759.86

INCOME ACCOUNT.

Operating revenues:	
Earnings from commercial sales.....	\$238.00
Earnings from sales to municipal department	24.00
Total operating revenue.....	\$262.00
Non-operating revenue	7.00
Total income	\$269.00

Operating expenses:	
Distribution	\$1.40
General administration—	
Salaries of general officers and clerks...	75.00
Miscellaneous expenses	101.40
Total	\$177.80
Taxes	11.80
Uncollectible accounts	17.91
Contractual sinking fund requirements....	100.00
Dividends	150.00
Total deductions	\$457.51
Net loss for year.....	\$188.51

MISCELLANEOUS STATISTICS.

Plant constructed in 1878. Source of supply, spring. Length and diameter of mains, 7,000', 4", 2½", 1½", and 1". Pressure on mains, 62-85 lbs. Connections: commercial services, 21; public buildings, 2.

BENNINGTON WATER WORKS COMPANY.

BENNINGTON, N. H.

PRINCIPAL OFFICERS.

President, Robert L. Manning; Vice-President, William G. Everett; Clerk, Harry E. Loveren, Manchester, N. H.; Caretaker, Charles A. Richardson, Bennington, N. H.

DIRECTORS.

Robert L. Manning, Harry E. Loveren, James H. Mendell, William G. Everett, Arthur W. Dudley, Manchester, N. H.

HISTORY.

Incorporated March 30, 1893, under special law of the State of New Hampshire; amended March 24, 1903.

LOCALITY SERVED.

Bennington.

CAPITAL STOCK.

Common stock, par value..... \$25,000.00
Dividends paid during year, none.
Number of stockholders, 3; all in New Hampshire.

BALANCE SHEET.

Assets.

Fixed capital:
Cost close of year..... \$25,810.00
Treasury bonds 12,500.00 || Cash | 214.25 |
| Total | \$38,524.25 |

Liabilities.

Capital liabilities:
Capital stock—preferred \$12,500.00 || Capital stock—common | 12,500.00 |
Interest accrued on funded debt.....	50.00
Bills payable (promissory notes).....	13,060.00
Surplus	414.25
Total	\$38,524.25

INCOME ACCOUNT.

Operating revenues:		
Earnings from commercial sales	\$1,444.97	
Earnings from industrial sales	50.00	
Earnings from municipal hydrant rentals..	250.00	
Total operating revenue.....	\$1,744.97	
Non-operating revenue:		
Miscellaneous	25.00	
Total income		\$1,769.97
Deductions from income:		
Distribution—		
Operating labor	\$216.92	
Meter and fittings department supplies and expenses	80.55	
Total	\$297.47	
Commercial—		
Expenses of collection.....	50.00	
General administration—		
Accidents and damages.....	\$2.30	
Miscellaneous general expenses..	79.50	
	81.80	
Taxes	190.86	
Interest on unfunded debt.....	952.01	
Total deductions		\$1,572.14
Net income		\$197.83
Surplus at beginning of year.....		261.39
Total surplus		\$459.22
Net adjustments during year.....		44.97
Surplus at close of year.....		\$414.25

MISCELLANEOUS STATISTICS.

Plant constructed about 1900. Supply, mainly from springs. Trunk lines and street mains: $\frac{1}{2}$ mile, 12"; $1\frac{1}{2}$ mile, 10"; 1 mile, 6"; $\frac{1}{2}$ mile, smaller pipe. Pressure on mains about 70 pounds. Connections: commercial services, 95; hydrants, 11; public buildings, 3.

BERLIN WATER COMPANY.

BERLIN, N. H.

No. 246 Main Street.

PRINCIPAL OFFICERS.

President, Sidney S. Twitchell, Berlin, N. H.; Clerk, H. M. Verrill, Portland, Me.; Treasurer, Mark A. Twitchell; Assistant Clerk and General Manager, C. C. Gerrish, Berlin, N. H.

DIRECTORS.

Sidney S. Twitchell, Mrs. L. E. Twitchell, Milan, N. H.; Mark A. Twitchell, Berlin, N. H.

HISTORY.

Incorporated May, 1897, under special law of the State of Maine. Originally incorporated August 9, 1889, under special law of the State of New Hampshire as The Berlin Aqueduct Company.

LOCALITIES SERVED.

Berlin and part of Gorham.

CAPITAL STOCK.

Common stock, par value.....	\$100,000.00
Dividends declared during year, none.	
Number of stockholders, 6; all in New Hampshire.	

BALANCE SHEET.

Assets.

Fixed capital:		
Cost beginning of year.....	\$402,093.00	
Construction and equipment current fiscal year	783.06	
Cost at close of year.....		\$402,876.06
Cash and current assets:		
Cash		1,199.81
Notes and bills receivable.....		253.03
Accounts receivable		2,840.59
Other current assets.....		2,443.97
Materials and supplies.....		1,945.85
Total		\$411,559.31

Liabilities.

Capital liabilities:		
Capital stock		\$100,000.00
Funded debt		175,000.00
Real estate mortgages.....		66,212.25
Accounts payable		541.03
Surplus		69,806.03
Total		\$411,559.31

INCOME ACCOUNT.

Operating revenues:		
Earnings from commercial sales.....	\$34,795.17	
Earnings from industrial sales.....	3,698.91	
Earnings from municipal hydrant rentals..	3,040.00	
Earnings from sales for street sprinkling..	300.00	
Earnings from sales to municipal department	731.86	
Miscellaneous earnings from operation.....	26.85	
Total operating revenues.....		\$42,592.79
Operating expenses:		
Pumping—		
Miscellaneous labor	\$687.10	
Power purchased	518.65	
Maintenance of source of supply.....	1,048.43	
Total—pumping	\$2,254.18	
Distribution—		
Operating labor	\$1,363.17	
Meter and fittings department and distribution systems	327.09	
Total—distribution	\$1,690.26	
General administration—		
Salaries of general officers and clerks...	\$4,904.50	
General office rents, supplies and expenses	1,401.25	
Law expenses	400.00	
Miscellaneous general expenses.....	549.79	
Total—general administration	\$7,255.54	

Depreciation	\$5,618.18	
Insurance	26.26	
Taxes	3,241.60	
Uncollectible accounts	1,460.15	
Interest on funded debt.....	8,750.00	
Interest on unfunded debt.....	3,532.24	
Total deductions		\$33,828.41
Net income		\$8,764.41
Surplus at beginning of year.....		61,041.62
Total surplus		\$69,806.03

MISCELLANEOUS STATISTICS.

Construction of plant completed in November, 1892. Source of supply at that time was Bean Brook. In 1904-05 Horn Brook was added to the supply.

Method of pumping: electricity.

Length and diameter of trunk lines and street mains: 9,125', 12"; 12,090', 10"; 4,280', 8"; 36,984', 10" cast iron pipe.

Pressure on mains: 90-100 pounds.

Connections: commercial services, 1,385; hydrants, 76; public buildings, 8; public fountains, 2.

Number and capacity of meters: 73, $\frac{5}{8}$ "; 55, $\frac{3}{4}$ "; 2, 2"; 2, 1"; 4, $1\frac{1}{2}$ "; 1 hydrant meter.

Amount of water metered during year: 7,207,865 cubic feet.

HENRY L. BOWLES.

LAKE SUNAPEE, N. H.

LOCATION OF OFFICE.

310 Main Street, Springfield, Mass.

LOCALITY SERVED.

Blodgett's Landing (Newbury).

INCOME ACCOUNT.

Operating revenues	\$295.00
Operating expenses	106.89
Net income	\$188.11

MISCELLANEOUS STATISTICS.

Operations commenced April 15, 1912. Source of supply: springs. 1 water tank. 1,300', $1\frac{1}{4}$ " and $1\frac{3}{4}$ " pipe. Connections: commercial services, 54.

BRISTOL AQUEDUCT COMPANY.

BRISTOL, N. H.

PRINCIPAL OFFICERS.

President, Karl G. Cavis; Clerk and Treasurer, Raymond Cavis; Auditors, F. A. Spencer and K. G. Cavis; Superintendent, Smith D. Fellows, Bristol, N. H.

DIRECTORS.

Karl G. Cavis, George H. Calley, Ira A. Chase, Fred A. Spencer, Frank N. Gilman, Burley M. Ames, Bristol, N. H.; Ferdinand A. Stillings, Concord, N. H.

HISTORY.

Incorporated April 3, 1886, under the general laws of the State of New Hampshire.

LOCALITY SERVED.

Bristol, N. H.

CAPITAL STOCK.

Capital stock	\$27,500.00
Dividends paid during year, 2%	550.00
Number of stockholders, 38; number in New Hampshire, 36.	
Par value of stock held in New Hampshire	26,200.00

BALANCE SHEET.

Assets.

Fixed capital:		
Cost at beginning of year	\$35,549.97	
Construction and equipment current fiscal year	4,813.28	
Cost close of year		\$40,363.25
Investments:		
Bristol Savings Bank account		2,340.18
Cash and current assets:		
Cash		842.22
Accounts receivable		1,681.66
Materials and supplies		250.00
Total		\$45,477.31

Liabilities.

Capital liabilities:		
Capital stock		\$27,500.00
Reserve, sinking and special fund liabilities:		
Depreciation reserve fund		9,768.03
Special funds		754.63
Current liabilities:		
Taxes accrued		273.77
Bills payable		169.50
Consumers' deposits		1,409.00
Surplus		5,602.38
Total		\$45,477.31

INCOME ACCOUNT.

Operating revenues:		
Earnings from commercial sales	\$1,947.01	
Municipal hydrant rentals)	700.00	
Sales for street sprinkling {		
Total operating revenues		\$2,647.01
Non-operating revenues:		
Apparatus rentals (net)	\$7.00	
Interest and dividends from investments ..	119.94	
Miscellaneous non-operating revenues	910.50	
Total non-operating revenues		1,037.44
Total income		\$3,684.45
Deductions from income:		
Operating expenses—		
Pumping—		
Pump labor	\$45.00	
Power purchased	726.00	
Miscellaneous pumping station supplies and expenses	63.55	
Total	\$834.55	

Distribution—		
Operating labor	\$225.00	
Maintenance of transmission and distribution systems	309.34	
Total	\$534.34	
General administration—		
Salaries of general officers and clerks..	\$581.50	
General office rents, supplies and expenses	161.63	
Law expenses	45.28	
Operation and maintenance of stores department	10.00	
Total	\$798.41	
Depreciation	768.03	
Taxes	583.73	
Total deductions		\$3,519.06
Net income		\$165.39
Surplus at beginning of year.....		5,986.99
Total surplus		\$6,152.38
Dividends		550.00
Surplus at close of year.....		\$5,602.38

MISCELLANEOUS STATISTICS.

Plant constructed largely in 1886; 3,000 to 4,000 feet of new pipe laid in 1911 and 1912. Gravity system, with a pump available in case of very low water. Pressure on mains, maximum 55 pounds.

Connections: commercial services, 260; hydrants, 41; public buildings, 3; public fountains, 1; water motors, 1. Two meters, 5-8". Water metered during year, 60,277 ½ gallons.

COLEBROOK WATER COMPANY.

COLEBROOK, N. H.

PRINCIPAL OFFICERS.

President, John J. Moore, 12 Pemberton Square, Boston, Mass.; Vice-President, Walter Drew; Clerk and Treasurer, John D. Annis, Colebrook, N. H.

DIRECTORS.

John J. Moore, Boston, Mass.; John D. Annis and Walter Drew, Colebrook, N. H.

HISTORY.

Incorporated February 23, 1897, under special law of the State of New Hampshire. Amended March 31, 1903.

LOCALITY SERVED.

Colebrook.

CAPITAL STOCK.

Common, par value \$30,000; preferred, par value, \$10,000; total	\$40,000.00
Dividends paid during year, common 4%, preferred 5%, total	1,700.00
Number of stockholders, 9; in New Hampshire, 8.	
Par value of stock held in New Hampshire.....	26,600.00

BALANCE SHEET.

Assets.

Cash	\$12.62
Accounts receivable	1,744.59
Property and plant.....	70,406.62
Total	<u>\$72,163.83</u>

Liabilities.

Notes and bills payable.....	\$1,300.00
Accounts payable	875.00
Capital stock—common	30,000.00
Capital stock—preferred	10,000.00
Funded debt	27,400.00
Surplus	2,588.83
Total	<u>\$72,163.83</u>

INCOME ACCOUNT.

Operating revenues:		
Earnings from commercial sales	\$3,615.53	
Earnings from municipal hydrant rentals..	1,200.00	
Earnings from sales for street sprinkling..	200.00	
Earnings from sales to municipal department	129.17	
Total	<u>\$5,144.70</u>	
Non-operating revenue	1.68	
Total income		<u>\$5,146.38</u>
Operating expenses:		
Pumping	\$156.84	
Distribution	212.05	
General administration	500.00	
Taxes	1,085.00	
Interest on funded debt.....	1,394.00	
Interest on unfunded debt.....	58.50	
Total deductions		<u>3,406.39</u>
Net income		<u>\$1,739.99</u>
Surplus at beginning of year.....		2,531.57
Total surplus		<u>\$4,271.56</u>
Net adjustments during year.....		17.27
Adjusted balance		<u>\$4,288.83</u>
Dividends		1,700.00
Surplus at close of year.....		<u>\$2,588.83</u>

MISCELLANEOUS STATISTICS.

Plant constructed in 1904. Source of supply: Beaver Brook and Durant Brook.

Length and diameter of trunk lines and street mains: 3,500', 10"; 1,000', 8"; 12,000', 6"; 15,000', 4"; 5,000', 2". Pressure on mains: 80 pounds. Connections: commercial services, 180; hydrants, 32; public buildings, 3; public fountains, 2; water motors, 2.

CONCORD HEIGHTS WATER COMPANY.

(See Plains Water Supply Co.)

COOS AND ESSEX WATER COMPANY.

NORTH STRATFORD, N. H.

PRINCIPAL OFFICERS.

President, G. R. Magoon, Lancaster, N. H.; Clerk, Treasurer and General Manager, J. C. Hutchins, North Stratford, N. H.

DIRECTORS.

G. R. Magoon, Lancaster, N. H.; B. W. Fisher, J. C. Hutchins, North Stratford, N. H.

HISTORY.

Incorporated under special law of the State of New Hampshire, March 9, 1899; amended March 8, 1905.

LOCALITIES SERVED.

North Stratford, N. H., and Bloomfield, Vt.

BALANCE SHEET.

Assets.

Cost of plant.....	\$10,000.00
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Liabilities.

Capital stock	\$10,000.00
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INCOME ACCOUNT.

Operating revenues	\$1,050.00
Operating expenses:	
Labor expense	\$305.00
Materials and other expense.....	102.00
Taxes	55.00
Total operating expenses.....	462.00
Net earnings	\$588.00
Dividends	588.00
Surplus at close of year.....	

MISCELLANEOUS STATISTICS.

Length and diameter of street mains: 5,280', 4"; 10,560', 2".
Reservoirs, 1; capacity, 500,000 gallons.
Services: Private consumers, 123; public buildings, 1; public fountains, 1.

CRYSTAL LAKE WATER COMPANY.

CANAAN, N. H.

PRINCIPAL OFFICERS.

President, Cary Smith; Clerk, Charles O. Barney; Treasurer, Ernest A. Barney; Superintendent, Oscar L. Rand, Canaan, N. H.

DIRECTORS.

Charles O. Barney, Oscar L. Rand, Cary Smith, Claude M. Murray, Ernest A. Barney, F. D. Currier, Canaan, N. H.

HISTORY.

Incorporated August 16, 1889, under special law of the State of New Hampshire.

LOCALITY SERVED.

Canaan.

CAPITAL STOCK.

Common stock	\$12,000.00
Dividends paid during year.....	1,200.00
Number of stockholders, 37; number in New Hampshire, 35.	
Par value of stock held in New Hampshire.....	11,800.00

BALANCE SHEET.

Assets.

Cash	\$401.35
Accounts receivable	186.93
Fixed capital	12,000.00
Depreciation reserve fund.....	4,564.50
Total	\$17,152.78

Liabilities.

Capital stock	\$12,000.00
Depreciation reserve	4,564.50
Surplus	588.28
Total	\$17,152.78

INCOME ACCOUNT.

Operating revenues:	
Commercial sales	\$1,144.06
Industrial sales	285.00
Municipal hydrant rentals.....	300.00
Total operating revenues.....	1,729.06
Operating expenses:	
Distribution—	
Operating labor	\$119.82
Street department supplies and expenses	146.44
Total distribution	\$266.26

General administration—

Salaries of general officers and clerks.....	\$50.00
Taxes	151.60
Internal revenue	13.37

Total deductions	\$481.23
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Net income	\$1,247.83
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Surplus at beginning of year.....	540.45
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Total surplus	\$1,788.28
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Dividends	1,200.00
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Surplus at close of year.....	\$588.28
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MISCELLANEOUS STATISTICS.

Plant constructed, 1890. Source of supply: Crystal Lake. Diameter of trunk lines and street mains, 12", 10", 8" and 6". Pressure on mains: 86 pounds. Connections: commercial services, 107; hydrants, 12; public buildings, 1; public fountains, 1; water motors, 2.

CRYSTAL SPRING WATER COMPANY.

(June 30, 1914.)

(George O. Robinson, Owner, Concord, N. H.)

This company supplies water to the public in five-gallon carboys from a spring located on Portsmouth Street, East Concord Village. Most of the water is sold to stores in the city of Concord and by them retailed to the public. The investment in the property is given as \$600.00. The earnings were approximately \$1,000.00 for the year, while the expenses were \$300.00, resulting in a net profit of approximately \$700.00. The plant was constructed about 1889.

DOW AND CARNES.**HENNIKER, N. H.****PARTNERS.**

G. W. S. Dow, Contoocook, and W. N. Carnes, Henniker, N. H.

LOCALITY SERVED.

Henniker.

FIXED CAPITAL.

Property and plant.....	\$325.00
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INCOME ACCOUNT.**Operating revenues:**

Commercial sales	\$36.00
Industrial sales	70.00

Total	106.00
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Operating expenses:

Collections	\$6.00
Taxes	5.70

Total expenses	11.70
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Net income	\$94.30
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MISCELLANEOUS STATISTICS.

Plant constructed in 1876. Source of supply, spring. Length of mains, $\frac{1}{4}$ mile. Connections: commercial services, 4.

DURHAM SPRING WATER COMPANY.

(C. H. Pettee, Owner.)

DURHAM, N. H.

LOCALITY SERVED.

Durham, N. H.

FIXED CAPITAL.

Cost of plant.....	\$2,660.00
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INCOME ACCOUNT.

Operating revenues:	
Commercial sales	\$430.00

Operating expenses:

Pumping—

Pump labor	\$50.00
Miscellaneous labor	10.00
Lubricants	15.00
Miscellaneous pumping station supplies and expenses	250.00

Total—pumping	\$325.00
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Distribution—

Meter and fittings department supplies and expenses	30.00
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Total operating expenses.....	\$355.00
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Taxes	20.00
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Total deductions	375.00
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Net income	\$55.00
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Payments from net income.....	55.00
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Surplus at close of year.....
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MISCELLANEOUS STATISTICS.

Plant is located on land of the respondent, and supply is obtained, except in emergencies, from a drilled well.

Method of pumping: gasoline engines.

Diameter and lengths of trunk lines and street mains: trunk lines, $1\frac{1}{2}$ " galvanized iron pipe; street mains, $1\frac{1}{2}$ " galvanized iron pipe, about one mile of mains; pressure, 40' to 60' pounds.

Connections: commercial services, 22.

Number and capacity of meters in use: 22 house size.

EPPING WATER COMPANY.

EPPING, N. H.

PRINCIPAL OFFICERS.

President, A. W. Mitchell; Clerk, Mrs. Hattie F. Mitchell; Treasurer and General Manager, W. C. Brown, Epping, N. H.

DIRECTORS.

A. W. Mitchell, Mrs. Hattie F. Mitchell, and W. C. Brown, Epping, N. H.

HISTORY.

Incorporated March 11, 1899, under special law of the State of New Hampshire.

LOCALITY SERVED.

Epping.

BALANCE SHEET.

Assets.

Cost of plant.....	\$6,879.99
Cash	49.25
Items receivable	158.74
Materials and supplies.....	47.00
Total	<u>\$7,134.98</u>

Liabilities.

Capital stock	\$5,600.00
Items payable	900.00
Profit	634.95
Total	<u>\$7,134.98</u>

INCOME ACCOUNT.

Operating revenues:	
Earnings from hydrant rentals.....	\$281.66
Other earnings	1,403.46
Total operating revenues.....	<u>\$1,685.32</u>
Operating expenses:	
Labor expense	\$307.44
Materials and other expense.....	432.22
Taxes	24.50
Total operating expenses.....	<u>764.16</u>
Profit for year.....	<u>\$921.16</u>

MISCELLANEOUS STATISTICS.

Pumps, 2; capacity, 70,000 gallons per day. Source of supply: river.
 Length and diameter of street mains: 5,280', 4"; 4,640', 2½" and 1¼". Standpipes, 2; capacity each, 5,000 and 10,000 gallons. Services: private consumers, 60; hydrants, 13; public buildings, 1. Meters, 33. Consumers, metered, 33; unmetered, 27.

EXETER WATER WORKS.

EXETER, N. H.

PRINCIPAL OFFICERS.

President, Edwin G. Eastman; Clerk, Chas. H. Johnson, Exeter, N. H.;
 Treasurer and Managing Director, Elbert Wheeler, 14 Beacon St., Boston,
 Mass.; Superintendent, Chas. H. Johnson, Exeter, N. H.

DIRECTORS

Edwin G. Eastman, Exeter, N. H.; William Wheeler, Boston, Mass.; Harvey Wheeler, Concord, Mass.; Chas. A. Roby, Nashua, N. H.; Elbert Wheeler, Boston, Mass.

HISTORY.

Incorporated August 12, 1885, under special law of the State of New Hampshire.

Amended: March 13, 1895.

LOCALITY SERVED.

Exeter.

CAPITAL STOCK.

Common stock, par value.....	\$108,350.00
Dividends paid during year, 6%.....	6,501.00
Number of stockholders, 33; number in New Hampshire, 19.	
Par value of stock held in New Hampshire.....	67,700.00

BALANCE SHEET.

Assets.

Cash	\$590.06
Bills receivable	8,818.81
Accounts receivable	1,469.52
Materials and supplies.....	941.29
Property and plant	186,327.46
Total	\$198,147.14

Liabilities.

Capital stock	\$108,350.00
Funded debt	50,000.00
Depreciation and renewal reserve fund.....	24,558.33
Surplus	15,238.31
Total	\$198,147.14

INCOME ACCOUNT.

Operating revenues:	
Commercial sales	\$18,123.95
Industrial sales	1,106.99
Municipal hydrant rentals.....	2,240.00
Sales to municipal department	533.00
Miscellaneous	113.90
Total operating revenue.....	\$22,117.84
Non-operating revenue:	
Interest on deposits	\$11.83
Interest and dividends from investments.....	418.03
Profit on merchandise sales (net).....	2.22
Profit on piping and connections (net).....	12.34
Total non-operating revenue	444.42
Total income	\$22,562.26
Operating expenses:	
Pumping—	
Superintendence	\$1,027.96
Pump labor	1,113.00
Purification labor	159.00
Miscellaneous labor	10.10
Lubricants	42.21
Purification supplies and expenses.....	905.50

Miscellaneous pumping station supplies and expenses	\$2,248.02	
Maintenance of source of supply.....	68.70	
Pumping station, buildings, fixtures and grounds	23.27	
Equipment	112.47	
Purification plant	114.33	
Total	\$5,824.56	
Distribution—		
Street department, supplies and expenses...	\$22.58	
Meter and fittings department, supplies and expenses	47.47	
Maintenance of trans. and dist. systems...	222.97	
Total	\$293.02	
Commercial	1.00	
General administration—		
Salaries	\$1,522.99	
General office rents, supplies and expenses.	415.33	
Miscellaneous	102.90	
Total—general administration	\$2,041.22	
Insurance	\$18.75	
Depreciation and renewal reserve.....	2,500.00	
Total operating expenses.....	\$10,678.55	
Taxes	1,239.59	
Interest on funded debt.....	2,250.00	
Total revenue deductions		\$14,168.14
Net income		\$8,394.12
Surplus at beginning of year.....		13,345.69
Total surplus		\$21,739.81
Dividends, 6%		6,501.00
Total surplus at close of year.....		\$15,238.81

MISCELLANEOUS STATISTICS.

Plant constructed in 1886. Method of pumping: steam.
Length and diameter of trunk lines and street mains: 5,331.7', 10";
7,711.8', 8"; 33,000.6', 6"; 17,506.7', 4"; 4,708.1', 1½"; 599.4', 1¼";
983.2', 1"; 1,113.3', ¾".
Pressure on mains: 26 lbs. to 61½ lbs.
Connections: commercial services, 949; hydrants, 61; public buildings,
9; public fountains, 1.
Number and capacity of meters: 19, ⅝"; 14, ¾"; 8, 1"; 5, 1½"; 1, 2";
1, 3"; 1, 4"; 1, 6".
Amount of water metered during year: 17,395,648 gal.
Amount of water pumped during year: 109,445,053 gal.

A. B. FORBUSH.

BERLIN, N. H.

LOCALITY SERVED.

Berlin.

FIXED CAPITAL.

Property and plant	\$6,000.00
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INCOME ACCOUNT.

Operating revenues:	
Commercial sales	\$1,377.42

Operating expenses:

Distribution—	
Pumping	\$44.67
Operating labor	392.50

Commercial—

Expenses of collection.....	50.00
Depreciation	300.00
Uncollectible accounts	114.00

Total operating expenses.....	\$901.17
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Net earnings	\$476.25
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MISCELLANEOUS STATISTICS.

Reservoir located on east side of Androscoggin River. Source of supply, springs. Diameter of mains, 2", 1½". Pressure, 30 lbs.
Connections: commercial services, 111.

N. K. FORREST.

SILVER LAKE, N. H.

LOCALITIES SERVED.

Silver Lake Village, in the Town of Madison.

BALANCE SHEET.

Assets.

Property and plant	\$1,390.00
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Liabilities.

Notes and bills payable	\$1,076.28
Surplus	313.72

Total	\$1,390.00
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INCOME ACCOUNT.

Operating revenues	\$75.00
Operating expenses	7.00

Net income	\$68.00
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MISCELLANEOUS STATISTICS.

Source of supply, spring. Plant constructed 1909.
Length and diameter of trunk lines and street mains: 1000', 2"; 4000', 1½".
Connections: commercial services, 9.

FORTIER AQUEDUCT.

MARLBORO, N. H.

PARTNERS.

C. E. B. Leonard, Beauregard Bros., Marlboro, N. H.; Rev. S. C. Ling, Keene, N. H.

LOCALITY SERVED.

Marlboro.

FIXED CAPITAL.

Property and plant.....	\$3,000.00
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INCOME ACCOUNT.

Operating revenues	\$121.91
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Operating expenses:

Miscellaneous labor	\$139.54
Taxes	23.00

Total	162.54
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Net loss	\$40.63
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MISCELLANEOUS STATISTICS.

Plant completed September 6, 1883. Source of supply, springs.
 Length of trunk lines, $\frac{3}{4}$ mile; street mains, $\frac{1}{4}$ mile.
 Connections: commercial services, 20; public buildings, 1.

FRANCESTOWN WATER COMPANY.

FRANCESTOWN, N. H.

PARTNERS.

Charles S. Vose, George E. Downes, L. M. Bixby, E. W. Farnum,
 Francetown, N. H.

LOCALITY SERVED.

Francetown, N. H.

BALANCE SHEET.

Assets.

Cost of plant.....	\$600.00
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Liabilities.

Capital stock	\$600.00
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INCOME ACCOUNT.

Operating revenues	\$74.50
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Operating expenses:

Collector's fees	5.00
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Net earnings	\$69.50
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MISCELLANEOUS STATISTICS.

Source of supply: spring.
 Length and diameter of street mains: 3,960', 1½".
 Services: consumers unmetered, 13.

FRANCONIA WATER COMPANY.

FRANCONIA, N. H.

PARTNERS.

Elmore Whipple and Mrs. T. J. Priest, Franconia, N. H.

LOCALITY SERVED.

Franconia.

BALANCE SHEET.

Assets.

Cost of plant.....	\$5,000.00
Cash	32.70
Items receivable	200.00
Materials and supplies.....	20.00
Total	<hr/> \$5,252.70

Liabilities.

Investment	\$5,000.00
Profit	252.70
Total	<hr/> \$5,252.70

INCOME ACCOUNT.

Operating revenues	\$554.70
Operating expenses:	
Labor expense	\$80.00
Materials and other expense.....	15.00
Taxes	72.00
Total operating expenses.....	<hr/> 172.00
Net earnings	\$382.70
Interest	350.00
Profit for year.....	<hr/> \$32.70

MISCELLANEOUS STATISTICS.

Plant constructed, 1908. Source of supply, springs.
Length and diameter of mains, 2½ miles, 3". Pressure on mains,
15-20 pounds. Connections: commercial services, 51; public buildings, 1.

FRYEBURG WATER COMPANY.

FRYEBURG, MAINE.

PRINCIPAL OFFICERS.

President and Superintendent, Henry B. Cotton, Center Conway, N. H.;
Clerk, George O. Warren; Treasurer, William H. Tarbox, Fryeburg, Me.

DIRECTORS.

Henry B. Cotton, Center Conway, N. H.; William H. Tarbox, William
Gordon, J. F. Phillips, Seth W. Fife, George O. Warren, Elmer Brackett,
Fryeburg, Me.

HISTORY.

Incorporated February 26, 1883, under the laws of the State of Maine.

LOCALITIES SERVED.

Fryeburg, Me., and East Conway, N. H.

CAPITAL STOCK.

Capital stock	\$16,000.00
Dividends	1,760.00
Number of stockholders, 39; number in New Hampshire, 2.	
Par value of capital stock held in New Hampshire.....	2,400.00

BALANCE SHEET.

Assets.

Cost of plant.....	\$34,903.76
Cash	1,705.57
Total	\$36,609.33

Liabilities.

Capital stock	\$16,000.00
Surplus	20,609.33
Total	\$36,609.33

INCOME ACCOUNT.

Operating revenues:	
Earnings from commercial sales.....	\$3,049.23
Earnings from municipal hydrant rentals..	100.00
Total operating revenues.....	\$3,149.23
Operating expenses:	
Maintenance of source of supply.....	\$192.49
Salaries of general officers and clerks.....	100.00
Taxes	490.10
Total deductions	782.59
Net income	\$2,366.67
Surplus at beginning of year.....	20,013.69
Total surplus	\$22,380.36
Net adjustments during year.....	11.03
Adjusted balance	\$22,369.33
Dividends	1,760.00
Surplus at close of year.....	\$20,609.33

MISCELLANEOUS STATISTICS.

Plant constructed in 1882. Source of supply; brooks, Fryeburg Village, N. H.

Method of pumping: none, gravity system. Pressure on mains: 60 pounds.

Diameters and lengths of trunk lines and street mains: trunk lines, 15.344 feet; street mains, 11.853 feet.

Number of connections: hydrants, 20; public buildings, 3; public fountains, 3; commercial service connections, 223.

GLEN WATER COMPANY.

GLEN, N. H.

PRINCIPAL OFFICERS.

President, O. S. Lucy; Treasurer and General Manager, J. F. Robinson,
Glen, N. H.

HISTORY.

Incorporated July 18, 1895, under the general laws of the State of New
Hampshire.

FIXED CAPITAL.

Fixed capital	\$2,150.00
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INCOME ACCOUNT.

Operating revenues	\$160.50
Operating expenses:	
Materials and other expense.....	\$6.58
Taxes	10.55
Total operating expenses.....	17.13
Net earnings	\$143.37

MISCELLANEOUS STATISTICS.

Source of supply: spring. Number of consumers, 15.

GRANNIS WATER WORKS.

(Hermon Holt, Owner.)

CLAREMONT, N. H.

LOCALITY SERVED.

Claremont.

BALANCE SHEET.

Assets.

Cost of plant.....	\$6,000.00
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Liabilities.

Investment	\$6,000.00
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INCOME ACCOUNT.

Operating revenues:	
Earnings from hydrant rentals.....	\$16.00
Other earnings	267.41
Total operating revenues.....	\$283.41
Operating expenses:	
Labor expense	\$104.00
Materials and other expense.....	5.00
Taxes	31.50
Total operating expenses.....	140.50
Net earnings	\$142.91

MISCELLANEOUS STATISTICS.

Plant constructed in about 1895. Source of supply: springs.
 Length and diameter of street mains: 200', 2"; 8,000', 3".
 Connections: commercial services, 17; public buildings 1. Consumers,
 unmetered, 20. Meters, 3.

OLE GUNDERSON.

BERLIN, N. H.

LOCALITY SERVED.

Berlin Mills, N. H.

FIXED CAPITAL.

Property and plant.....	\$1,690.00
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INCOME ACCOUNT.

Operating revenues:	
Earnings	\$221.00
Operating expenses:	
Labor expense	\$75.50
Materials and other expense.....	56.18
Taxes	12.50
Total operating expenses.....	144.18
Net earnings	\$76.82
Interest	40.00
Profit for year.....	\$36.82

MISCELLANEOUS STATISTICS.

Source of supply: 5 wells.
 Length and diameter of street mains: 700', 1½"; 200', 2"; 2000', 1¼";
 200', 1"; 150', ¾".
 Connections: commercial services, 24.

H. H. HALL.

BATH, N. H.

LOCALITY SERVED.

Bath, N. H.

BALANCE SHEET.

Assets.

Cost of plant.....	\$400.00
Items receivable	238.85
Materials and supplies.....	4.00
Total	\$642.85

Liabilities.

Investment	\$400.00
Items payable	131.93
Profit	110.92
Total	\$642.85

INCOME ACCOUNT.

Operating revenues		\$111.00
Operating expenses:		
Labor expense	\$66.50	
Materials and other expense.....	26.40	
Taxes	9.52	
		<hr/>
Total operating expenses.....		102.42
		<hr/>
Net earnings		\$8.58
Interest		24.00
		<hr/>
Loss for year.....		\$15.42
Profit at beginning of year.....		126.34
		<hr/>
Profit at close of year.....		\$110.92

MISCELLANEOUS STATISTICS.

Length and diameter of street mains: 1,000', 1"; 1,000', $\frac{3}{4}$ ".
 Services: consumers, 9.

HAMPTON WATER WORKS COMPANY.

HAMPTON, N. H.

PRINCIPAL OFFICERS.

President, William H. Jaques, Little Boar's Head, N. H.; Clerk, John Scammon, Exeter, N. H.; Treasurer, Ernest G. Cole, Hampton, N. H.; Auditor, Perley Gardner, Exeter, N. H.; Superintendent (acting), Martin R. Jones, Hampton, N. H.

DIRECTORS.

Edwin G. Eastman, Exeter, N. H.; William H. Jaques, Little Boar's Head, N. H.; John Scammon, Exeter, N. H.; Otis H. Whittier, Hampton, N. H.; Perley Gardner, Exeter, N. H.; Ernest G. Cole, Hampton, N. H.

HISTORY.

Incorporated August 14, 1889, under special law of the State of New Hampshire.

LOCALITY SERVED.

Hampton, N. H.

CAPITAL STOCK.

Capital stock	\$37,000.00
Dividends paid during year, none.	
Number of stockholders, 29; number in New Hampshire, 26.	
Par value of capital stock held in New Hampshire.....	36,200.00

BALANCE SHEET.

Assets.

Fixed capital:		
Cost at beginning of year.....	\$69,456.56	
Construction and equipment current fiscal year	755.86	
		<hr/>
Cost at close of year.....		\$70,212.42
Cash and current assets:		
Cash		139.98
Accounts receivable		703.88
Other current assets.....		300.00
Materials and supplies		1,712.18

Prepayments:	
Prepaid insurance	\$14.57
Prepaid interest	66.67
Total	<u>\$73,149.70</u>

Liabilities.

Capital liabilities:	
Capital stock—common	\$37,000.00
Mortgage liabilities:	
Real estate mortgages	20,000.00
Current liabilities:	
Bills payable (Promissory Notes)	7,000.00
Surplus	9,149.70
Total	<u>\$73,149.70</u>

INCOME ACCOUNT.

Operating revenues:	
Commercial sales	\$6,443.62
Municipal hydrant rentals	1,150.00
Total operating revenues	<u>\$7,593.62</u>
Non-operating revenues:	
Miscellaneous	33.40
Total income	<u>\$7,627.02</u>

Deductions from income:

Operating expenses—

Pumping—

Pump labor	\$622.00
Power purchased	391.43
Lubricants	3.35
Purification supplies and expenses....	6.00
Miscellaneous pumping station supplies and expenses	479.52
Maintenance of source of supply	716.64

Total

Distribution—

Operating labor	\$523.00
Street department, supplies and expenses	329.43

Total

General administration—

Salaries of general officers and clerks...	\$600.00
General office rents, supplies and ex- penses	274.49
Law expenses	50.00

Total

Insurance	37.50
Taxes	283.64
Interest on funded debt	1,000.00
Interest on unfunded debt	413.00

Total

Total deductions

Net income

Surplus at beginning of year

Total surplus

Net adjustments during year (Debit)

Surplus at close of year

MISCELLANEOUS STATISTICS.

Plant constructed, 1907; source of supply, wells; pumps operated by electricity and gasoline; lengths and diameters of trunk lines, 4 miles, 6" and 8"; pressure, 48-60 pounds.

Connections: commercial services, 380; hydrants, 23; public buildings, 1.

HANOVER AQUEDUCT ASSOCIATION.

HANOVER, N. H.

PRINCIPAL OFFICERS.

President, John K. Lord; Clerk, Charles P. Chase; Treasurer and Superintendent, Gilman D. Frost; Auditor, Frank A. Sherman, Hanover, N. H.

DIRECTORS.

John K. Lord, Charles O. Chase, Gilman D. Frost, Hanover, N. H.

HISTORY.

Incorporated December 13, 1820, under special law of the State of New Hampshire.

LOCALITY SERVED.

Hanover, N. H.

CAPITAL STOCK.

Capital stock	\$10,000.00
Dividends declared during year, 6%	600.00
Number of stockholders, 21; number in New Hampshire, 18.	
Total par value of capital stock held in New Hampshire....	9,100.00

BALANCE SHEET.

Assets.

Cost of plant	\$10,000.00
Treasury stock	900.00
Investments:	
Stock and bonds of other companies.....	500.00
Other investments	2,000.00
Cash	563.27
Total	\$13,963.27

Liabilities.

Capital stock	\$10,000.00
Surplus	3,963.27
Total	\$13,963.27

INCOME ACCOUNT.

Operating revenue:	
Earnings from commercial sales.....	\$874.10
Miscellaneous earnings from operation.....	4.34
Total operating revenue	\$878.44
Non-operating revenue:	
Interest on deposits	\$9.01
Interest and dividends from investments.....	206.00
Total non-operating revenue	\$215.01
Total income	\$1,093.45

Operating expenses:

Distribution—		
Maintenance of Trans. and Dist. Systems..	\$16.35	
Commercial—		
Expenses of collection	37.83	
General administration—		
Salaries of general officers and clerks.....	100.00	
Taxes	114.53	
Total deductions		268.71
Net income		\$824.74
Surplus at beginning of year.....		3,738.53
Total surplus		\$4,563.27
Dividends		600.00
Surplus at close of year.....		\$3,963.27

MISCELLANEOUS STATISTICS.

Source of supply: 9 wells, about two miles from village. Two of the wells date from 1820, and seven date from about 1880.
 Method of pumping: none.
 Diameter of mains: 2".
 Number of connections: commercial services, 120.
 Number and capacity of meters: none.

HANOVER WATER WORKS COMPANY.

HANOVER, N. H.

PRINCIPAL OFFICERS.

President, Robert Fletcher; Clerk and Treasurer, Perley R. Bugbee; Auditor, Charles P. Chase; Superintendent, Edward P. Storrs; Assistant Superintendent, Elmer F. Ford, Hanover, N. H.

DIRECTORS.

Ernest F. Nichols, Robert Fletcher, Edward P. Storrs, Perley R. Bugbee, John M. Gile, Homer E. Keyes, Charles A. Holden, Hanover, N. H.

HISTORY.

Incorporated March 31, 1893, under special law of the State of New Hampshire.

LOCALITIES SERVED.

Hanover, N. H., and Lewiston Village in the town of Lewiston, Vt.

CAPITAL STOCK.

Common stock, par value.....	\$45,000.00
Dividends paid during year, 5%.....	2,250.00
Number of stockholders, 2; both in New Hampshire.	

BALANCE SHEET.

Assets.

Cash	\$519.19
Accounts receivable	2,222.50
Other current assets.....	8,000.00
Property and plant.....	129,252.58
Total	\$139,994.27

Liabilities.

Current liabilities:	
Taxes accrued	\$457.30
Interest accrued on funded debt.....	410.00
Interest accrued on unfunded debt.....	400.00
Bills payable	3,600.00
Dividends payable	1,125.00
Capital stock	45,000.00
Funded debt	20,000.00
Real estate mortgages.....	20,000.00
Surplus	49,001.97
Total	<u>\$139,994.27</u>

INCOME ACCOUNT.

Operating revenues:	
Earnings from commercial sales.....	\$5,514.11
Earnings from municipal hydrant rentals..	1,000.00
Miscellaneous earnings	6.25
Total operating revenue.....	<u>\$6,520.36</u>
Non-operating revenue:	
Real estate	\$162.50
Products sold	2,597.09
Miscellaneous revenue	331.00
Total	<u>3,090.59</u>
Total income	<u>\$9,610.95</u>
Operating expenses:	
Commercial	\$135.83
General administration:	
Salaries of general officers and clerks...	450.00
General office rents, supplies and ex-	
penses	174.59
Operation and maintenance.....	1,313.18
Total	<u>\$1,937.77</u>
Contingencies	6,438.57
Insurance	78.00
Taxes	418.66
Interest on funded debt.....	780.00
Interest on unfunded debt.....	857.56
Total deductions	<u>10,646.39</u>
Net loss	<u>\$1,035.44</u>
Surplus at beginning of year.....	41,913.36
Total surplus	<u>\$40,877.92</u>
Net adjustments during year (debit).....	10,374.05
Adjusted balance (surplus).....	<u>\$51,251.97</u>
Dividends	2,250.00
Surplus at close of year.....	<u>\$49,001.97</u>

MISCELLANEOUS STATISTICS.

Plant constructed, 1893; purchased by respondent in 1903. Trunk line, 2½ miles; street mains, 2½ miles; diameter of pipe 10", 8", 6", 4"; pressure on mains, 55-110 pounds. Connections: commercial services, 360; hydrants, 67; public buildings, 3; public fountains, 3; water motors, 1; meters, experimental, 16.

HARTFORD WATER COMPANY.

WHITE RIVER JUNCTION, VT.

PRINCIPAL OFFICERS.

President, Charles P. Chase, Hanover, N. H.; Vice-President, Thomas W. Streeter, Concord, N. H.; Clerk and General Manager, Frank Collins, White River Junction, Vt.; Treasurer, Robert W. Sanford, Boston, Mass.

DIRECTORS.

Charles P. Chase, Hanover, N. H.; Thomas W. Streeter, Concord, N. H.; William W. Russell, Mrs. Pauline Towle, Alfred Watson, White River Junction, Vt.

HISTORY.

Incorporated November 24, 1890, under special law of the State of Vermont. Constituted a corporation within New Hampshire by special act approved February 16, 1897.

LOCALITIES SERVED.

White River Junction, Vt., and West Lebanon, N. H.

CAPITAL STOCK.

Common stock	\$75,000.00
Dividends paid during year, none.	
Number of stockholders, 6; number in New Hampshire, 2.	
Par value of stock held in New Hampshire.....	200.00

BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$6,594.44
Notes and bills receivable.....	11,500.00
Accounts receivable	2,301.46
	<hr/>
	\$20,395.90
Property and plant.....	120,316.43
	<hr/>
Total	\$140,712.33

Liabilities.

Current liabilities:	
Taxes account	\$442.26
Interest accrued on funded debt.....	562.50
Accounts payable	316.98
Capital stock	\$1,321.74
Capital stock	75,000.00
Funded debt	45,000.00
Surplus	19,390.59
	<hr/>
Total	\$140,712.33

INCOME ACCOUNT.

Operating revenue	\$9,426.82
Non-operating revenue	371.81
	<hr/>
Total income	\$9,798.63

Operating expenses:

Pumping—		
Pump labor	\$784.24	
Miscellaneous pumping station supplies and expenses	2.63	
Total	\$786.87	
General administration—		
Salaries of general officers and clerks....	399.96	
Miscellaneous general expenses.....	476.58	
Total	\$876.54	
Taxes	1,119.11	
Interest on funded debt.....	2,250.00	
Total deductions		\$5,032.52
Net income		\$4,766.11
Surplus at beginning of year.....		15,374.48
Total surplus		\$20,140.59
Net adjustments during year.....		750.00
Surplus at close of year.....		\$19,390.59

MISCELLANEOUS STATISTICS.

Length and diameter of trunk lines: 500', 12"; 3,000', 10"; 8,500', 8".
 Pressure on mains, 45-140 pounds. Street mains: 5,000', 8"; 18,500' 6";
 1,500', 4"; 1,500', 1½".
 Connections: commercial services, 502; hydrants, 56; public buildings,
 3; fountains, 2; elevators, 1.
 Number and capacity of meters, 17, 1½"-5½".
 Amount of water metered during year, 1,883,220 cubic feet.

HAVERHILL AQUEDUCT COMPANY.

HAVERHILL, N. H.

PRINCIPAL OFFICERS.

President and Clerk, P. W. Kimball; Treasurer, Tyler Westgate;
 Superintendent, J. R. Day, Haverhill, N. H.

DIRECTORS.

Tyler Westgate, Charles P. Page, P. W. Kimball, Haverhill, N. H.

LOCALITY SERVED.

Village of Haverhill Corner, Haverhill, N. H.

BALANCE SHEET.

Assets.

Cost of plant.....	\$1,600.00
Cash	92.10
Items receivable	120.00
Total	\$1,812.10

Liabilities.

Capital stock	\$1,600.00
Profit	212.10
Total	\$1,812.10

INCOME ACCOUNT.

Operating revenues		\$339 00
Operating expenses:		
Labor expense	\$100.68	
Materials and other expense.....	2.07	
Taxes	29.60	
		<hr/>
Total operating expenses.....		\$132.35
		<hr/>
Net earnings		\$206.65
Dividends		192.00
		<hr/>
Profit for year.....		\$14.65

MISCELLANEOUS STATISTICS.

Length and diameter of mains: 2½ miles 1¾". Consumers: 43.

HENNIKER SPRING WATER COMPANY.

HENNIKER, N. H.

(Report for year ending August 1, 1914.)

PRINCIPAL OFFICERS.

President and General Manager, George P. Gove, Bedford, N. H.;
Clerk and Treasurer, J. C. Cogswell, Henniker, N. H.

DIRECTORS.

George P. Gove, Henniker, N. H.; John F. Gove, Bedford, N. H.;
Henry A. Emerson, William O. Folsom, George H. Sanborn, George C. Pres-
ton, J. C. Cogswell, Henniker, N. H.

HISTORY.

Incorporated March 7, 1885, under the general laws of the State of
New Hampshire. Amended: May 19, 1898; December 28, 1898.

LOCALITY SERVED.

Henniker.

CAPITAL STOCK.

Common stock, par value.....	\$8,000.00
Dividends declared during year, 6%.....	480.00
Number of stockholders, 16; number in New Hampshire, 14.	
Par value of stock held in New Hampshire.....	7,100.00

BALANCE SHEET.

Assets.

Fixed capital	\$8,000.00
Cash	31.20
Accounts receivable	64.00
Deficit	1,104.80
	<hr/>
Total	\$9,200.00

Liabilities.

Capital stock	\$8,000.00
Bills payable (promissory notes).....	1,200.00
	<hr/>
Total	\$9,200.00

HILL WATER WORKS.

603

INCOME ACCOUNT.

Operating revenues:		
Earnings from commercial sales.....	\$1,413.86	
Earnings from municipal hydrant rentals..	35.00	
Total	\$1,448.86	
Non-operating revenue:		
Interest on deposits.....	\$68.21	
Total income		\$1,517.07
Operating expenses:		
Commercial—		
Expenses of collection.....	\$100.08	
Expenses of promotion of business.....	3,694.30	
Total	\$3,794.38	
General administration	341.76	
Taxes	127.50	
Total deductions		4,263.64
Net loss		\$2,746.57
Surplus at beginning of year.....		2,121.77
Total deficit		\$624.80
Dividends		480.00
Deficit at close of year.....		\$1,104.80

MISCELLANEOUS STATISTICS.

Plant constructed 1884, 1892 and 1895. Source of supply, springs.
Length of trunk lines, 1½ miles; length of street mains, 2 miles.
Pressure, 10-70 pounds per square inch.
Connections: commercial services, 161; hydrants, 7; public buildings, 3; water motors, 2.

NOTE—Report for 11 months to August 1, 1914. Property was on this date transferred to the town.

HILL WATER WORKS.

(Frank R. Woodward, Owner.)

HILL. N. H.

LOCALITY SERVED.

Hill.

BALANCE SHEET.

Assets.

Cost of plant.....	\$11,500.00
Items receivable	322.00
Total	\$11,822.00

Liabilities.

Investment	\$11,500.00
Items payable	81.00
Profit	241.00
Total	\$11,822.00

INCOME ACCOUNT.

Operating revenues		\$571.00
Operating expenses:		
Labor expense	\$300.00	
Materials and other expense.....	30.00	
	<hr/>	
Total operating expenses.....		330.00
		<hr/>
Profit for year.....		\$241.00

MISCELLANEOUS STATISTICS.

Source of supply, springs and brook.
Length and diameter of mains, 1½ miles, 4"-6". Pressure, 45 pounds.
Connections: commercial services, 54; hydrants, 6; public buildings, 3.

JOHN A. HOLT.

EAST CANDIA, N. H.

LOCALITY SERVED.

East Candia.

FIXED CAPITAL.

Fixed capital	\$1,500.00
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INCOME ACCOUNT.

Operating revenues	\$72.00
Operating expenses	64.47
	<hr/>
Net income	\$7.53

MISCELLANEOUS STATISTICS.

Source of supply: drilled well.
Length and diameter of mains: 500', 3".
Reservoirs: 1 tank; capacity, 3,000 gallons.
Services: private consumers, 12; hydrants, 1. Consumers: unmetered, 12.

HOOKSETT AQUEDUCT COMPANY.

HOOKSETT, N. H.

(Lillian A. Stevens, Owner.)

LOCALITY SERVED.

Hooksett, on west side of the Merrimack River.

BALANCE SHEET.

Assets.

Cost of plant.....	\$700.00
Loss	100.00
	<hr/>
Total	\$800.00

Liabilities.

Mortgage liability	\$800.00
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INCOME ACCOUNT.

Operating revenues	\$318.00
Operating expenses:	
Labor expense	\$26.00
Materials and other expense.....	110.15
Taxes	7.00
	<hr/>
Total operating expenses.....	143.15
	<hr/>
Net earnings	\$174.85
Interest	32.00
	<hr/>
Profit for year.....	\$142.85

MISCELLANEOUS STATISTICS.

- Number of pumps: 1. Source of supply: pond.
 Length and diameter of street mains: 3,500', 2"; 1,600', 1½"; 1,200', 1".
 Reservoirs: 1; capacity, 10,000 gallons.
 Services: private consumers, 31; public buildings, 2; watering troughs,
 1. Method of pumping: electric. Pressure on mains: about 40 to 80 feet.

HOPKINTON VILLAGE AQUEDUCT ASSOCIATION.

HOPKINTON, N. H.

PRINCIPAL OFFICERS.

President, Clerk and Treasurer. H. F. Edmunds, Hopkinton, N. H.

DIRECTORS.

J. E. Derry, E. E. Dunbar, G. W. Mills, F. L. Flanders, Hopkinton, N. H.

HISTORY.

Incorporated June 19, 1840, under special law of the State of New Hampshire.

BALANCE SHEET.

Assets.

Cost of plant.....	\$4,500.00
Cash	60.00
	<hr/>
Total	\$4,560.00

Liabilities.

Capital stock	\$2,587.50
Items payable	600.00
Profit	1,372.50
	<hr/>
Total	\$4,560.00

INCOME ACCOUNT.

Operating revenues	\$585.00
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Operating expenses:	
Labor expense	\$28.48
Materials and other expense.....	15.73
Total operating expenses.....	<u>\$44.21</u>
Net earnings	\$540.79
Interest	<u>478.50</u>
Profit at close of year.....	\$62.29

MISCELLANEOUS STATISTICS.

Source of supply: artesian well.
 Method of pumping, gasoline engine.
 Length and diameter of trunk lines and street mains, $\frac{1}{2}$ mile, 3".
 Connections: private consumers, 44; hydrants, 1; public buildings, 2.

HUDSON WATER COMPANY.

HUDSON, N. H.

PRINCIPAL OFFICERS.

President, Herbert Payson, Portland, Maine; Clerk, Harry P. Greeley, Nashua, N. H.; Treasurer, Edgar R. Payson, Portland, Maine.

DIRECTORS.

Charles H. Payson, George S. Payson, Herbert Payson, Portland, Maine.

HISTORY.

Incorporated February 14, 1905, under special law of the State of New Hampshire.

LOCALITY SERVED.

Hudson.

CAPITAL STOCK.

Capital stock	\$50,000.00
Dividends paid during year, none.	
Number of stockholders, 7; number in New Hampshire, 1.	

BALANCE SHEET.

Assets.

Cash and current assets:	
Cash	\$163.08
Accounts receivable	913.65
Property and plant.....	<u>\$1,076.73</u>
Treasury stock	59,856.48
Suspense	45,000.00
	<u>719.73</u>
Total	\$106,652.94

Liabilities.

Current liabilities:	
Accounts payable	\$5,825.22
Taxes accrued	250.00
Interest accrued on funded debt.....	150.01
Capital stock	50,000.00
Funded debt	50,000.00
Surplus	<u>427.71</u>
Total	\$106,652.94

INCOME ACCOUNT.

Operating revenues:		
Commercial sales		\$2,831.44
Municipal hydrant rentals.....		440.00
Total operating revenues.....		\$3,271.44
Non-operating revenue		35.00
Total income		\$3,306.44
Operating expenses:		
Pumping—		
Power purchased	\$175.00	
Distribution—		
Street department supplies and expenses	116.92	
Maintenance of transmission and distribu-		
tion systems	50.00	
Total distribution	\$166.92	
Commercial—		
Expenses of collection.....	50.00	
General administration—		
Salaries of general officers and clerks..	\$150.00	
General office rents, supplies and expenses	86.51	
Law expenses	300.00	
Total general administration.....	\$536.51	
Insurance	4.75	
Taxes	500.00	
Interest on funded debt.....	2,000.00	
Interest on unfunded debt.....	243.91	
Total deductions		3,677.09
Net loss		\$370.65
Surplus at beginning of year.....		798.36
Surplus at close of year.....		\$427.71

MISCELLANEOUS STATISTICS.

Plant constructed in 1891, and in subsequent years; 1905, new wells and extensions, and in 1911-12 the plant was reconstructed.

Method of pumping: steam.

Length and diameter of trunk lines and street mains: 6857', 8"; 5974', 6"; 1404', 5"; 5886', 4"; 500', 3"; 6098', 2".

Pressure on mains: 30-50 pounds.

Connections: commercial services, 145; hydrants, 12; public buildings, 1; public fountains, 1.

Amount of water pumped during year: 27,010,000 gallons.

JACKSON WATER WORKS COMPANY.

JACKSON, N. H.

(Report for year ending May 1, 1914.)

PRINCIPAL OFFICERS.

President, Treasurer and General Manager, Charles W. Gray; Clerk, Frank M. Gray, Jackson, N. H.

DIRECTORS.

Charles W. Gray, Arthur C. Gray, Frank M. Gray, Jackson, N. H.

HISTORY.

Incorporated March 13, 1903, under special law of the State of New Hampshire.

LOCALITY SERVED.

Jackson, N. H.

BALANCE SHEET.

Assets.

Cost of plant	\$8,500.00
Cash	25.00
Items receivable	225.00
Total	<u>\$8,750.00</u>

Liabilities.

Capital stock	\$8,500.00
Profit	250.00
Total	<u>\$8,750.00</u>

INCOME ACCOUNT.

Operating revenues	\$752.50
Operating expenses:	
Labor expense	\$225.00
Materials and other expense	361.73
Taxes	5.50
Total operating expenses	<u>592.23</u>
Net earnings	<u>\$160.27</u>

MISCELLANEOUS STATISTICS.

Source of supply: mountain streams.
Length and diameter of mains: 1200', 8"; balance 6".
Reservoirs: 2.

Services: consumers, 39.

KENDRICK & DAVIS COMPANY.

LEBANON, N. H.

PRINCIPAL OFFICERS.

President, W. H. Crozier; Treasurer, R. R. Wood; Secretary, C. K. Wood, Lebanon, N. H.

DIRECTORS.

W. H. Crozier, R. R. Wood, C. K. Wood, Lebanon, N. H.

HISTORY.

Incorporated October 22, 1909, under the general laws of the State of New Hampshire.

LOCALITY SERVED.

Lebanon.

FIXED CAPITAL.

Fixed capital	\$1,000.00
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LACONIA WATER COMPANY.

609

INCOME ACCOUNT.

Operating revenues	\$161.25
Operating expenses:	
Taxes	17.20
Net earnings	<u>\$144 05</u>

MISCELLANEOUS STATISTICS.

Source of supply: springs.
Length and diameter of street mains: 4 miles, 2".
Connections: commercial services, 25.

SAMUEL O. KIMBALL.

TAMWORTH, N. H.

LOCALITY SERVED.

A part of Tamworth, N. H.

FIXED CAPITAL.

Property and plant	\$1,386.48
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INCOME ACCOUNT.

Operating revenues	\$160.00
Operating expenses:	
Taxes	8.00
Net earnings	<u>\$152.00</u>

MISCELLANEOUS STATISTICS.

Operations commenced, 1905.
Source of supply: spring located about ½ mile from Tamworth Village.
Length and diameter of street mains: 2640', 2".
Connections: public buildings, 1; consumers unmetered, 20.

LACONIA WATER COMPANY.

LACONIA, N. H.

PRINCIPAL OFFICERS.

President, Geo. H. Roby, Lakeport, N. H.; Clerk and Treasurer, Edmund Little; Auditors, C. L. Pulcifer and J. W. Ashman, Laconia, N. H.; Superintendent, Frank P. Webster, Lakeport, N. H.

DIRECTORS.

Charles B. Hibbard, Edmund Little, Stanton Owen, Laconia, N. H.; George H. Roby, Frank P. Webster, Charles H. Perkins; Chas. L. Pulcifer, Lakeport, N. H.

HISTORY.

Date of incorporation: September 7, 1883, as Laconia & Lake Village Water Works.

Amended: August 28, 1885; February 18, 1891.

Name changed: February 23, 1897.

Incorporated under special law of the State of New Hampshire.

LOCALITY SERVED.

Laconia.

CAPITAL STOCK.

Common stock	\$142,000.00
Dividends paid during year, 6%	8,520.00
Number of stockholders, 148, number in New Hampshire, 136.	
Par value of stock held in New Hampshire	138,600.00

BALANCE SHEET.

Assets.

Cash	\$10,903.44
Materials and supplies	1,600.00
Prepayments	64.00
Property and plant	175,514.85
Total	\$188,082.29

Liabilities.

Current liabilities:		
Accounts payable	\$1,707.97	
Taxes accrued	575.00	
Interest on funded debt	193.75	
		\$2,476.72
Capital stock		142,000.00
Funded debt		15,500.00
Depreciation reserve fund		5,000.00
Surplus		23,105.57
Total		\$188,082.29

INCOME ACCOUNT.

Operating revenues:	
Commercial sales	\$24,137.58
Industrial sales	1,564.64
Municipal hydrant rentals	2,408.33
Sales for street sprinkling	391.31
Sales to municipal department	649.52
Total operating revenues	\$29,151.38

Non-operating revenues:	
Real estate rentals	\$375.00
Interest on deposits	278.90
Miscellaneous	17.20
Total	\$671.10
Total income	\$29,822.48

Operating expenses:	
Pumping—	
Pump labor	\$1,200.00
Miscellaneous	343.95
Power purchased	1,116.14
Maintenance of source of supply—	
Pumping sta., bldgs., fixtures and grounds	668.21
Total	\$3,328.30
Distribution—	
Operating labor	\$2,117.73
Street department, sup. and ex.	2,720.50
Meter and fittings dept., sup. and ex.	76.78
Maintenance of trans. and dist. sys.	405.20
Total	\$5,320.21

General administration—	
Salaries	\$2,222.00
General office rents, sup. and ex.....	280.97
Accidents and damages.....	30.00
Miscellaneous	66.90
Total—general administration.....	\$2,599.87
Insurance	76.70
Total operating expenses.....	\$2,676.57
Taxes	2,398.84
Interest on funded debt.....	965.72
Total revenue deductions.....	\$14,689.64
Net income	\$15,132.64
Surplus at beginning of year.....	22,305.45
Total surplus	\$37,438.29
Net adjustments during year (debit).....	5,812.72
Adjusted balance	\$31,625.57
Dividends	8,520.00
Surplus at close of year.....	\$23,105.57

MISCELLANEOUS STATISTICS.

Plant is located at Lakeport, and was constructed in 1885.
Source of supply: Lake Winnepesaukee.
Method of pumping: steam changed to electricity during year.
Length and diameter of trunk lines and street mains: 13694', 12"; 5055', 10"; 5582', 8"; 7647', 6"; 3297', 4"; 19,968', 2"; 16011', 1½"; 5850', 1¼"; 2818', 1".
Pressure on mains: 19–84 lbs.
Connections: commercial services, 2067; hydrants, 119; public buildings, 20; public fountains, 3; water motors, 7.
Number and capacity of meters: 1850, ½"—2".
Amount of water metered during year: 83,433,775 gals.
Amount of water pumped during year: 154,386,750 gals.

HENRY A. LAXSON.

GOFFSTOWN, N. H.

LOCATION OF OFFICES.

Room 214, The Kennard Building, Manchester, N. H.

LOCALITY SERVED.

Summer colony on and around Uncanoonuc Mountain.

HISTORY.

Operations commenced May 1, 1913. This water service is for Uncanoonuc Mountain cottages and is expected to operate from May to October each year.

BALANCE SHEET.

Assets.

Cost of plant.....	\$2,000.00
Cash	233.00
Materials and supplies.....	50.00
Total	\$2,283.00

Liabilities.

Investment	\$2,050.00
Profit	233.00
Total	<u>\$2,283.00</u>

INCOME ACCOUNT.

Operating revenues	\$336.00
Operating expenses:	
Labor expense	\$60.00
Materials and other expense.....	43.00
Total operating expenses.....	<u>103.00</u>
Profit for year.....	\$233.00

MISCELLANEOUS STATISTICS.

Source of supply: spring well, 12 feet from pumping station.
Pumps: 1 electric motor, capacity 40 gallons per minute.
Length and diameter of street mains: 3,000', 2" or 3".
Reservoirs: 3; capacity each 30,000, 16,000, 16,000.
Connections: commercial services, 23.

NATHANIEL R. LEACH.

ERROL, N. H.

LOCALITY SERVED.

Errol N. H.

BALANCE SHEET.

Assets.

Cost of plant.....	\$2,000.00
Items receivable	358.00
Loss	142.00
Total	<u>\$2,500.00</u>

Liabilities.

Investment	\$2,500.00
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INCOME ACCOUNT.

Operating revenues	\$289.50
Operating expenses:	
Labor expense	\$59.60
Materials and other expense.....	3.49
Taxes	17.88
Total operating expenses.....	<u>70.97</u>
Net earnings	\$218.53

MISCELLANEOUS STATISTICS.

Length and diameter of trunk lines: $\frac{3}{4}$ mile, 1 $\frac{1}{2}$ "; $\frac{1}{4}$ mile, 1 $\frac{1}{4}$ ".
Connections: commercial services, 11; public buildings, 3.

LISBON WATER WORKS COMPANY.

LISBON, N. H.

PRINCIPAL OFFICERS.

President, H. B. Moulton; Clerk and Treasurer, E. H. Hallett; Superintendent, W. L. Chamberlin, Lisbon, N. H.

DIRECTORS.

H. B. Moulton, C. L. Moulton, E. H. Hallett, Lisbon, N. H.

HISTORY.

Incorporated September 30, 1887, under special law of the State of New Hampshire.

LOCALITIES SERVED.

Lisbon and Landaff.

CAPITAL STOCK.

Common stock	\$20,000.00
Dividends paid during year.....	1,000.00
Number of stockholders, 2; both in New Hampshire.	

BALANCE SHEET.

Assets.

Fixed capital:		
Cost beginning of year.....	\$19,687.00	
Construction and equipment current fiscal year	2,090.79	
Cost close of year.....		\$21,777.79
Cash and current assets:		
Cash		\$597.00
Other current assets.....		30.00
Materials and supplies.....		564.15
Total		\$22,968.94

Liabilities.

Capital stock	\$20,000.00
Surplus	2,968.94
Total	\$22,968.94

INCOME ACCOUNT.

Operating revenues:		
Earnings from commercial sales	\$3,866.28	
Earnings from industrial sales	634.00	
Earnings from municipal hydrant rentals..	1,264.00	
Earnings from sales for street sprinkling..	75.00	
Earnings from sales to municipal department	155.00	
Total		\$5,994.28

Operating expenses:	
Distribution	\$700.99
Commercial	125.00
General administration	1,250.00
Taxes	730.30
Total deductions	\$2,806.29
Net income	\$3,187.99
Surplus at beginning of year.....	499.80
Total surplus	\$3,687.79
Net adjustments during year (credit).....	281.15
Adjusted balance	\$3,968.94
Dividends	1,000.00
Surplus at close of year.....	\$2,968.94

MISCELLANEOUS STATISTICS.

Source of supply: Pearl Lake.
 Length and diameter of trunk line: 1 mile, 8". Length and diameter of street mains: 1 $\frac{1}{8}$ mile, 6"; 2 $\frac{1}{8}$ miles, 4". Pressure on mains: 70-100 pounds.
 Connections: commercial services, 222; hydrants, 42; public fountains, 1; public buildings, 2.
 Number of meters in use, 1.
 Amount of water metered during year: July 1, 1913, to August 25, 1914, 2,922,522 gallons.

J. E. LOMBARD WATER WORKS.

COLEBROOK, N. H.

LOCALITY SERVED.

Colebrook.

BALANCE SHEET.

Assets.

Cost of plant.....	\$1,000.00
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Liabilities.

Investment	\$1,000.00
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INCOME ACCOUNT.

Operating revenues	\$349.00
Operating expenses:	
Labor expense	\$50.00
Materials and other expense.....	20.00
Taxes	22.00
Total operating expenses.....	92.00
Net earnings	\$257.00
Interest	50.00
Total deductions	\$307.00
Profit for year.....	\$42.00

MISCELLANEOUS STATISTICS.

Source of water supply: springs.
 Street mains: approximately 1 mile, 1 $\frac{1}{2}$ "-2".
 Consumers: 38.

LYME AQUEDUCT COMPANY.

LYME, N. H.

PRINCIPAL OFFICERS.

President, Arad J. Warren; Clerk and Treasurer, Payson E. Fairfield,
Lyme, N. H.

DIRECTORS.

David A. Grant, Arad J. Warren, Isaac N. Perkins, Lyme, N. H.

HISTORY.

Incorporated June 23, 1831, under the general laws of the State of New Hampshire.

LOCALITY SERVED.

Lyme.

BALANCE SHEET.

Assets.

Cost of plant	\$700.00
Cash	36.80
Items receivable	6.50
Total	<hr/> \$743.30

Liabilities.

Investment	\$700.00
Profit	43.30
Total	<hr/> \$743.30

INCOME ACCOUNT.

Operating revenues	\$222.50
Operating expenses:	
Labor expense	\$110.97
Materials and other expense.....	59.48
Taxes	13.32
Total operating expenses.....	<hr/> 183.77
Net earnings	\$38.73
Dividends	\$100.00
Other payments	9.43
Total deductions	<hr/> 109.43
Loss for year.....	\$70.70
Surplus at beginning of year.....	114.00
Profit at close of year.....	<hr/> \$43.30

MISCELLANEOUS STATISTICS.

Plant constructed in about 1831. Source of supply: springs.
Size of street mains: 1½" and ¾".
Connections: commercial services, 40.

MASCOMA AQUEDUCT COMPANY.

ENFIELD, N. H.

PRINCIPAL OFFICERS.

President, James C. Clough; Secretary, Mrs. Elizabeth W. Lovejoy;
General Manager, John L. Lovejoy, Enfield, N. H.

HISTORY.

Date of organization: September 19, 1881.
No record of incorporation.

LOCALITY SERVED.

Enfield.

BALANCE SHEET.

Assets.

Cost of plant	\$270.00
Cash	20.37
Total	<hr/> \$290.37

Liabilities.

Capital stock	\$270.00
Investments	18.12
Profit	2.25
Total	<hr/> \$290.37

INCOME ACCOUNT.

Operating revenues	\$6.75
Operating expenses:	
Labor expense	\$4.00
Materials and other expense .....	.50
Total operating expenses	<hr/> 4.50
Net earnings	<hr/> \$2.25

MISCELLANEOUS STATISTICS.

Source of supply: 2 springs.

MERIDEN WATER COMPANY.

MERIDEN, N. H.

PRINCIPAL OFFICERS.

President, Robert R. Penniman; Vice-President, Alvah B. Chellis; Clerk,
Charles Alden Tracy; Treasurer, Frank M. Howe, Meriden, N. H.

DIRECTORS.

Alvah B. Chellis, Robert R. Penniman, John F. Cann, Charles Alden
Tracy, Frank M. Howe, Meriden, N. H.

HISTORY.

No record of incorporation.

LOCALITY SERVED.

Plainfield.

BALANCE SHEET.

Assets.

Cost of plant	\$11,171.37
Cash	180.53
Items receivable	17.32
Materials and supplies.....	190.64
Total	<u>\$11,559.86</u>

Liabilities.

Capital stock	\$9,800.00
Items payable	291.58
Profit	1,468.28
Total	<u>\$11,559.86</u>

INCOME ACCOUNT.

Operating revenues	\$310.27
Operating expenses:	
Labor expense	\$173.50
Materials and other expense.....	377.57
Taxes	10.36
Total operating expenses.....	<u>561.43</u>
Net loss	\$251.16
Interest .....	.63
Loss for year.....	<u>\$251.79</u>
Profit at beginning of year.....	1,720.07
Profit at close of year.....	<u>\$1,468.28</u>

MISCELLANEOUS STATISTICS.

Plant constructed in 1890 and 1908. Source of supply: springs and wells.
 Length and diameter of street mains: 10,560', 2½"; 7,040', 4"; 7,040', 2".
 Reservoirs, 2; capacity each 30,000 gals. and 20,000 gals.
 Services: consumers, 32; hydrants, 1; public fountains, 1.
 Consumers: unmetered, 28.

H. N. MERRILL.

WARREN, N. H.

LOCALITY SERVED.

Warren Village, N. H.

FIXED CAPITAL.

Property and plant	\$5,000.00
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INCOME ACCOUNT.

Operating revenues	\$197.00
Operating expenses	<u>75.00</u>
Net earnings	\$122.00

MISCELLANEOUS STATISTICS.

Number of consumers, 22.

MOUNT CRESCENT WATER COMPANY.

RANDOLPH, N. H.

PRINCIPAL OFFICERS.

President, F. E. Cliff, Somerville, Mass.; Clerk, Arthur L. Hunt, Randolph, N. H.; Treasurer, A. H. Gill, Canton, Mass.

DIRECTORS.

F. E. Cliff, Somerville, Mass.; A. L. Hunt, Randolph, N. H.; A. H. Gill, Canton, Mass.; R. H. Richards, Jamaica Plain, Mass.; W. O. Pray, New York, N. Y.

HISTORY.

Incorporated March 13, 1907, under special act of the State of New Hampshire.

LOCALITY SERVED.

Randolph.

BALANCE SHEET.

Assets.

Cost of plant.....	\$2,894.51
Cash	1,046.26
Total	<u>\$3,940.77</u>

Liabilities.

Capital stock	\$3,200.00
Profit	740.77
Total	<u>\$3,940.77</u>

INCOME ACCOUNT.

Operating revenues	\$344.00
Operating expenses:	
Labor and material.....	\$90.50
Taxes (Federal)	2.37
Total operating expenses.....	<u>92.87</u>
Net earnings	\$251.13
Dividends	82.00
Profit for year.....	<u>\$169.13</u>
Profit at beginning of year.....	571.64
Profit at close of year.....	<u>\$740.77</u>

MISCELLANEOUS STATISTICS.

Length and diameter of street mains: 8,788', 2"; 2,054', 1½".
Reservoirs: 1; capacity, 15,000 to 18,000 gallons.
Services: consumers, 18.

MOUNT PLEASANT RESERVOIR.

(James A. Fletcher, Owner.)

FARMINGTON, N. H.

LOCALITY SERVED.

Farmington.

FIXED CAPITAL.

Property and plant.....	\$6,600.00
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INCOME ACCOUNT.

Operating revenues		\$413.50
Operating expenses	\$172.00	
Taxes	73.00	
	<hr/>	
Total deductions		245.00
		<hr/>
Net earnings		\$168.50

MISCELLANEOUS STATISTICS.

Source of supply: spring and artesian well.
Method of pumping: electricity.
Length and diameter of trunk lines and street mains: 3050', 4"; 2500', 2"; 1000', 1½".
Connections: commercial services, 53; hydrants, 5.
Reservoirs, 1; capacity, 100,000 gallons.
Standpipes, 1; capacity, 3,300 gallons.

MT. ST. MARY'S SEMINARY.

HOOKSETT, N. H.

LOCALITY SERVED.

Hooksett.

INCOME ACCOUNT.

Operating revenues		\$100.00
Operating expenses:		
Labor expense	\$15.00	
Materials and other expense.....	5.00	
	<hr/>	
Total operating expenses.....		20.00
		<hr/>
Net earnings		\$80.00

MISCELLANEOUS STATISTICS.

Plant constructed about 1887. Source of supply: brook.
Length and diameter of trunk line, 5000', 2½". Pressure, 25 pounds.
Connections: commercial services, 25.
The supplying of water is not the principal business of the respondent.
The utility is operated in connection with school buildings maintained by the respondent.
The investment in the utility is estimated at \$200.00.

NORTH HAVERHILL WATER COMPANY.

NORTH HAVERHILL, N. H.

PARTNERS.

E. B. Willoughby, G. F. Kimball, F. R. Dean, North Haverhill, N. H.

LOCALITY SERVED.

North Haverhill, N. H.

FIXED CAPITAL.

Property and plant.....	\$2,000.00
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INCOME ACCOUNT.

Operating revenues	\$371.04
Operating expenses:	
Labor expense	\$33.50
Materials and other expense.....	11.30
Taxes	49.80
	<hr/>
Total operating expenses.....	94.60
Net earnings	<hr/> \$276.44

MISCELLANEOUS STATISTICS.

Length and diameter of street mains: 4,800', 1½".
Consumers, metered, 38.

NORTHUMBERLAND AQUEDUCT COMPANY.

(Arthur R. Chase, Owner.)

NORTHUMBERLAND, N. H.

LOCATION OF OFFICE.

Kennebunk, Maine.

LOCALITY SERVED.

Northumberland.

FIXED CAPITAL.

Property and plant.....	\$350.00
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INCOME ACCOUNT.

Operating revenues	\$47.00
Operating expenses	19.80
	<hr/>
Net earnings	\$27.20

MISCELLANEOUS STATISTICS.

Plant constructed about 1883. Source of supply: spring; one reservoir.
Connections: commercial services, 13; public fountains, 1.

OSS�PEE WATER & ELECTRIC COMPANY.

MOUNTAINVIEW, N. H.

PRINCIPAL OFFICERS.

President, George W. Bent; Clerk, E. W. Hodsdon; Treasurer, Ernest C. Huckins; General Manager, Lyford A. Merrow; Superintendent, Frank E. Palmer, Mountainview, N. H.

DIRECTORS.

George W. Bent, Lyford A. Merrow, S. O. Huckins, E. W. Hodsdon, J. W. Chamberlin, A. F. Abbott, J. W. Thompson, Mountainview, N. H.

HISTORY.

Incorporated March 30, 1911, under special law of the State of New Hampshire.

LOCALITIES SERVED.

Moultonville, Mountainview, Center Ossipee, and Doris Corner.
(All in the town of Ossipee.)

BALANCE SHEET.

Assets.

Cost of plant	\$16,500.00
Cash	224.37
Items receivable	199.45
Materials and supplies	25.00
Total	<hr/> \$16,948.82

Liabilities.

Capital stock	\$11,000.00
Items payable	5,325.64
Profit	623.18
Total	<hr/> \$16,948.82

INCOME ACCOUNT.

Operating revenues	\$738.40
Operating expenses	432.03
Net earnings	<hr/> \$306.37
Interest	250.00
Profit for year	<hr/> \$566.81
Profit at beginning of year.....	566.81
Profit at close of year.....	<hr/> \$623.19

MISCELLANEOUS STATISTICS.

Source of supply: water from river.

Length and diameter of street mains: 580', 10"; 420', 8"; 12,600', 6";
1,190', 4"; 6,280', 2"; 2,000', 1".

Reservoirs, 1.

Connections: commercial services, 73; hydrants, 14; public fountains, 1.

PENNICHUCK WATER WORKS.

144 MAIN ST., NASHUA, N. H.

PRINCIPAL OFFICERS.

President, John F. Stark; Clerk, James H. Tolles; Treasurer, Harry M. Hobson; Auditor, Geo. H. Alley; Superintendent, William F. Sullivan, Nashua, N. H.

DIRECTORS.

John F. Stark, James H. Tolles, Daniel W. Lakeman, Harry W. Ramsdell, James F. Whitney, Nashua, N. H.

HISTORY.

Incorporated as Nashville Aqueduct, June 19, 1852, under special law of the State of New Hampshire.

Amended and name changed to Pennichuck Water Works, June 27, 1853.

LOCALITY SERVED.

Nashua.

CAPITAL STOCK.

Capital stock	\$700,000.00
Dividends paid during year, 6%	42,000.00
Number of stockholders, 389; number in New Hampshire, 330.	
Par value of stock held in New Hampshire	597,500.00

BALANCE SHEET.

Assets.

Fixed capital:		
Cost beginning of year	\$829,782.40	
Construction and equipment current fiscal year	2,808.56	
Cost close of year		\$832,590.96
Cash and current assets:		
Cash		47,534.07
Accounts receivable		25,200.81
Materials and supplies		7,664.30
Other current assets		2,008.54
Prepayments:		
Prepaid taxes		1,094.33
Total		\$916,093.01

Liabilities.

Capital liabilities:		
Capital stock		\$700,000.00
Reserve, sinking and special fund liabilities:		
Depreciation reserve fund		39,769.71
Current liabilities:		
Interest accrued on unfunded debt		427.13
Bills payable		20,500.00
Surplus		155,396.17
Total		\$916,093.01

PENNICHUCK WATER WORKS.

623

INCOME ACCOUNT.

Operating revenue:	
Commercial sales	\$71,848.41
Industrial sales	13,495.62
Municipal hydrant rentals.....	9,975.00
Sales for street sprinkling.....	125.71
Sales to municipal department.....	1,181.02
	<hr/>
Total operating revenue	\$96,625.76
Non-operating revenue:	
Real estate rentals.....	\$534.00
Interest on deposits.....	982.07
Profit on merchandise sales (net).....	2.07
Profit on piping and connections (net).....	36.81
Miscellaneous non-operating revenue.....	4,093.31
	<hr/>
Total non-operating revenue.....	5,648.26
	<hr/>
Total income	\$102,274.02
Deductions from income:	
Operating expenses—	
Pumping—	
Superintendence	\$1,000.00
Pump labor	1,416.12
Miscellaneous labor	224.91
Lubricants	58.54
Miscellaneous pumping station supplies and expenses	1,300.75
Maintenance of source of supply.....	72.80
Pumping station, buildings, fixtures and grounds	1,176.09
	<hr/>
Total	\$5,249.21
Distribution—	
Operating labor	2,464.99
Meter and fittings department supplies and expenses	1,707.43
Maintenance of transmission and distribution systems	4,685.46
	<hr/>
Total	\$8,857.88
Commercial	2,109.41
General administration—	
Salaries of general officers and clerks..	6,573.66
General office rents, supplies and expenses	1,135.77
Law expenses	388.65
Operation and maintenance of stores department	173.33
Miscellaneous general expenses.....	104.49
	<hr/>
Total	\$8,375.90
Depreciation	10,000.00
Insurance	408.57
Taxes	21,067.44
Uncollectible accounts	31.90
Interest on unfunded debt.....	951.72
	<hr/>
Total	\$32,459.63
	<hr/>
Total deductions	\$57,052.03
	<hr/>
Net income	\$45,221.99
Surplus at beginning of year	152,174.18
	<hr/>
Total surplus	\$197,396.17
Dividends	42,000.00
	<hr/>
Surplus at close of year.....	\$155,396.17

MISCELLANEOUS STATISTICS.

Construction of plant began in 1853; continued enlarging and improving to date.

Source of supply: mainly from wells and springs, some distance north of the city, with an auxiliary pond supply.

Method of pumping: steam, hydraulic and electric.

Length and diameter of mains: 16,660', 24"; 17,582', 16"; 600', 14"; 14,514', 12"; 12,010', 10"; 27,342', 8"; 135,691', 6"; 62,484', 4"; 777', 3".

Pressure on mains: 0-67 pounds.

Connections: commercial services, 3,948; hydrants, 334; public buildings, 27; public fountains, 15; water motors, 7; hydraulic elevators, 4.

Number and capacity of meters: 25, $\frac{1}{2}$ "; 625, $\frac{3}{8}$ "; 326, $\frac{3}{4}$ "; 110, 1"; 39, $1\frac{1}{2}$ "; 25, 2"; 4, 3"; 13, 4"; 2, 6"; total, 1,169.

Amount of water metered during year: 255,399,225 gallons.

Amount of water pumped during year: 900,546,459 gallons.

PITTSFIELD AQUEDUCT COMPANY.

PITTSFIELD, N. H.

PRINCIPAL OFFICERS.

President, Sherburne J. Winslow; Clerk, Nathaniel S. Drake; Treasurer, Herbert B. Fischer; Auditors, S. J. Winslow and N. S. Drake; Superintendent, Nathaniel M. Batchelder, Pittsfield, N. H.

DIRECTORS.

Sherburne J. Winslow, Charles H. Lowe, Frank W. Adams, Charles N. Batchelder, Frank H. Sargent, Hiram Tuttle Folsom, Pittsfield, N. H.

HISTORY.

Incorporated July 2, 1870, under special law of the State of New Hampshire. Amended: July 25, 1883; September 2, 1887.

LOCALITY SERVED.

Pittsfield.

CAPITAL STOCK.

Capital stock	\$40,000.00
Dividends paid during year.....	2,800.00
Number of stockholders, 27; number in New Hampshire, 25.	
Par value of capital stock held in New Hampshire.....	39,900.00

BALANCE SHEET.

Assets.

Fixed capital:	
Cost at close of year.....	\$40,000.00
Investments:	
Stocks and bonds of other companies.....	4,272.52
Reserve, sinking and special fund assets:	
Depreciation reserve fund.....	500.00
Special funds	1,368.41
Cash and current assets:	
Cash	1,719.16
Accounts receivable	2,078.14
Materials and supplies	325.00

Prepayments:	
Prepaid taxes	\$1,113.94
Total	\$51,377.17

Liabilities.

Capital liabilities:	
Capital stock—common	\$40,000.00
Reserve, sinking and special fund liabilities:	
Depreciation reserve fund	500.00
Current liabilities	200.00
Taxes accrued	1,485.25
Dividends payable	40.50
Surplus	9,151.42
Total	\$51,377.17

INCOME ACCOUNT.

Operating revenues:	
Commercial sales	\$4,738.22
Industrial sales	100.00
Municipal hydrant rentals.....	1,399.00
Total operating revenues	\$6,237.22
Non-operating revenues:	
Apparatus rentals	\$5.00
Interest on deposits	47.98
Interest and dividends from investments.....	166.43
Total non-operating revenues	219.41
Total income	\$6,456.63
Deductions from income:	
Operating expenses—	
Pumping—	
Superintendence	\$300.00
Miscellaneous labor	69.73
Total	\$369.73
Distribution—	
Street department supplies and expenses.	\$337.84
General administration—	
Salaries of general officers and clerks...	\$100.00
General office rents, supplies and ex-	
penses	19.01
Miscellaneous general expenses.....	152.43
Total	\$271.44
Depreciation	500.00
Taxes	1,442.22
Total deductions	2,921.23
Net income	\$3,535.40
Surplus at beginning of year.....	8,468.19
Total surplus	\$12,003.59
Net adjustments during year (debit).....	52.17
Adjusted balance	\$11,951.42
Dividends	2,800.00
Surplus at close of year.....	\$9,151.42

MISCELLANEOUS STATISTICS.

Plant constructed in 1884. Source of supply: Berry Pond.
Length and diameter of trunk lines and street mains: 7400', 10"; 2900',
8"; 9000', 6"; 7850', 4"; 5250', 2". Pressure on mains: 60-100 pounds.
Connections: commercial services, 384; hydrants, 40; public buildings,
7; public fountains, 2; water motors, 1.

PLAINS WATER SUPPLY COMPANY.

(A. B. Stearns, Owner.)

CONCORD PLAINS, N. H.

LOCALITY SERVED.

Plains District (Concord).

BALANCE SHEET.

Assets.

Cost of plant.....	\$2,000.00
Deficit	500.00
Total	\$2,500.00

Liabilities.

Mortgage liability	\$2,500.00
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INCOME ACCOUNT.

Operating revenues	\$312.43
Operating expenses	313.41
Loss for year.....	\$0.98

MISCELLANEOUS STATISTICS.

Plant constructed in 1893. Source of supply: well.
 Method of pumping: electric power, and windmill.
 Diameter of street mains: 4".
 Connections: commercial services, unmetered, 63; public buildings, 1.
 Reservoirs, 1; capacity, 10,000 gallons. Pumps, 1. Pressure on
 mains: about 20 pounds.

MARY F. ROBINSON.

EAST CONCORD, N. H.

LOCALITY SERVED.

East Concord (Concord).

FIXED CAPITAL.

Property and plant.....	\$1,500.00
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INCOME ACCOUNT.

Operating revenues	\$163.00
Operating expenses:	
Labor expense	\$20.00
Materials and other expense.....	40.00
Total operating expenses.....	60.00
Net earnings	\$103.00

MISCELLANEOUS STATISTICS.

Constructed about 1875. Source of supply: springs.
 Diameter and length of street mains: 4950', 2" iron pipe. Pressure on
 mains, 6-8 pounds.
 Connections: unmetered consumers, 15; public fountains, 1.

CHARLES E. SHEPARD.

NEW LONDON, N. H.

LOCALITY SERVED.

New London.

FIXED CAPITAL.

Property and plant.....	\$5,000.00
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INCOME ACCOUNT.

Operating revenues	\$694.00
Operating expenses:	
Labor expense	\$75.00
Materials and other expense.....	225.00
Taxes	46.50
	<hr/>
Total operating expenses.....	\$46.50
	<hr/>
Net earnings	\$347.50
Interest	250.00
	<hr/>
Profit for year.....	\$97.50

MISCELLANEOUS STATISTICS.

Pumps, 1. Source of supply: artesian well.
 Reservoirs, 1; capacity, 33,000.
 Consumers, 20; public buildings, 1.

WILLIAM C. STARRETT.

BENNINGTON, N. H.

LOCALITY SERVED.

Bennington.

FIXED CAPITAL.

Property and plant.....	\$1,100.00
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INCOME ACCOUNT.

Operating revenues	\$109.50
Operating expenses	5.00
	<hr/>
Net earnings	\$104.50

MISCELLANEOUS STATISTICS.

Plant constructed in 1906. Source of supply: spring.
 Length and diameter of mains: 3350', 2½".
 Connections: commercial services, 17; public fountains, 1

SUNCOOK WATER WORKS.

SUNCOOK, N. H.

This property was on July 1, 1914, transferred to the municipality of Suncook.

PRINCIPAL OFFICERS.

President, Rufus M. Weeks, Suncook, N. H.; Vice-President, Arthur B. Weeks, Manchester, N. H.; Clerk, George E. Miller, Suncook, N. H.; Treasurer, Eugene S. Head, Hooksett, N. H.; General Manager and Superintendent, Curtis E. Dalton, Suncook, N. H.

DIRECTORS.

Rufus M. Weeks, Curtis E. Dalton, George E. Miller, Suncook, N. H.; Arthur B. Weeks, Manchester, N. H.; Eugene S. Head, Hooksett, N. H.

HISTORY.

Incorporated February 19, 1891, under special law of the State of New Hampshire. Amended February 26, 1895.

LOCALITIES SERVED.

Pembroke and Allenstown.

BALANCE SHEET.

Assets.

Cash	\$1,446.78
Notes and bills receivable.....	350.00
Materials and supplies.....	530.00
Property and plant.....	102,515.30
Total	<hr/> \$104,842.08

Liabilities.

Capital stock	\$100,000.00
Items payable	115.00
Surplus	4,727.08
Total	<hr/> \$104,842.08

INCOME ACCOUNT.

Operating revenues:	
Municipal hydrant rentals.....	\$1,300.00
Miscellaneous	6,122.31
Total operating revenues.....	<hr/> \$7,422.31
Operating expenses:	
Pumping—	
Superintendence	\$650.00
Miscellaneous	2,184.91
Total operating expenses.....	<hr/> \$2,834.91
Taxes	759.00
Total revenue deductions.....	<hr/> \$3,593.91
Surplus for year	<hr/> \$3,828.40

MISCELLANEOUS STATISTICS.

Plant constructed in 1895. Source of supply: Oak Hill section, so called, in Allenstown. Method of pumping: electricity and gasoline (mostly a gravity system).

Length and diameter of trunk lines and street mains: $8\frac{7}{8}$ miles, 6", 8", 10", 12". Pressure on mains: 50-110 pounds. 3300 feet of pipe of various sizes were laid this year.

Number of connections: commercial services, 356; hydrants, 52; public buildings, 4. Number of meters, 100.

TILTON & NORTHFIELD AQUEDUCT COMPANY.

TILTON, N. H.

PRINCIPAL OFFICERS.

President, Arthur S. Brown; Clerk, William B. Fellows; Treasurer, William H. Moses, Tilton, N. H.

DIRECTORS.

William H. Moses, Arthur S. Brown, Otis Daniels, Tilton, N. H.

HISTORY.

Incorporated June 21, 1887, under special law of the State of New Hampshire.

LOCALITIES SERVED.

Tilton and Northfield.

CAPITAL STOCK.

Capital stock	\$87,400.00
Dividends paid during year, 8%.....	6,992.00
Number of stockholders, 5; all in New Hampshire.	

BALANCE SHEET.

Assets.

Fixed capital:	
Cost beginning of year.....	\$89,229.44
Construction and equipment current fiscal year	358.87
Cost close of year.....	\$89,589.21
Cash and current assets:	
Cash	1,111.15
Total	\$90,699.46

Liabilities.

Capital liabilities:	
Capital stock	\$87,400.00
Current liabilities:	
Bills payable	1,800.00
Surplus	1,499.46
Total	\$90,699.46

INCOME ACCOUNT.

Operating revenues	\$10,364.88
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Deductions from income:

Operating expenses—		
Distribution—		
Operating labor	\$143.78	
Street department supplies and expenses	121.64	
Total	\$265.42	
General administration—		
Salaries of general officers and clerks	\$2,468.22	
General office rents, supplies and expenses	150.00	
Total	\$2,618.22	
Taxes	1,013.35	
Total deductions		\$3,896.99
Net income		\$6,467.89
Surplus at beginning of year.....		1,155.84
Total surplus		\$7,623.73
Net adjustments during year.....		867.73
Adjusted balance		\$8,491.46
Dividends		6,992.00
Surplus at close of year.....		\$1,499.46

MISCELLANEOUS STATISTICS.

Plant constructed in 1888. Source of supply: Chestnut Pond.
 Diameter of mains: 6", 8" and 10". Pressure on mains: 80-110 pounds.
 Connections: commercial services, 585; hydrants, 38; public buildings, 2.
 Number and capacity of meters: 3, 1¾"; 2, 1½".
 Amount of water metered during year: 638,003 cubic feet.

TYLER SPRING WATER SYSTEM.

(C. A. Rice, Owner.)

CLAREMONT, N. H.

LOCALITY SERVED.

Claremont, N. H.

BALANCE SHEET.

Assets.

Property and plant.....	\$7,500.00
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Liabilities.

Mortgage liabilities	\$7,500.00
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INCOME ACCOUNT.

Operating revenues	\$1,050.70
Operating expenses:	
Operating labor	\$75.00
General office rents, supplies and expenses	35.00
Taxes	143.50
Interest on funded debt.....	425.00
Total expenses	678.50
Net income	\$372.50

MISCELLANEOUS STATISTICS.

Source of supply: springs.
 Length and diameter of street mains: 5 miles, $\frac{3}{8}$ " to 1".
 Length and diameter of trunk lines: $1\frac{1}{2}$ miles, 3"; $\frac{2}{3}$ mile, 2".
 Pressure on mains: 25-50 pounds.
 Connections: commercial services, 165.
 Number and capacity of meters in use: 1, $\frac{3}{4}$ " meter.
 Amount of water metered during year: 11,950 cubic feet.

UNITED REALTY COMPANY.

MERRIMACK, N. H.

PRINCIPAL OFFICERS.

President, J. Franklin McElwain; Vice-President, Charles J. Prescott;
 Treasurer, Edward L. Prescott; Secretary, Stanley King, Boston, Mass.

DIRECTORS.

J. Franklin McElwain, Charles J. Prescott, Edward L. Prescott, Stanley
 King, Boston, Mass.

HISTORY.

Incorporated February 13, 1907, under the general laws of the State of
 Maine.

LOCALITY SERVED.

Merrimack, N. H.

BALANCE SHEET.

Assets.

Cost of plant.....	\$2,500.00
Items receivable	158.00
Loss	2,500.00
Total	\$5,158.00

Liabilities.

Capital stock	\$5,000.00
Items payable	158.00
Total	\$5,158.00

INCOME ACCOUNT.

Operating revenues	\$303.73
Operating expenses:	
Materials and other expense.....	\$386.23
Taxes	32.50
Total operating expenses.....	418.73
Loss	\$115.00
Loss at beginning of year.....	2,385.00
Loss at close of year.....	\$2,500.00

MISCELLANEOUS STATISTICS.

Pumps, 1; capacity, 139,680 gallons per day.
 Source of supply: Souhegan River.
 Reservoirs: 2 tanks; capacity, 7,500 gallons and 10,000 gallons.
 Services: number at close of year to private consumers, 46.
 Method of pumping: electric. Gallons pumped during year, 27,000,000.

WALPOLE WATER & SEWER COMPANY.

WALPOLE, N. H.

PRINCIPAL OFFICERS.

President, Wallace L. Mason, Keene, N. H.; Clerk and Treasurer, F. D. Rodenbush; Superintendent, W. D. Knowlton, Walpole, N. H.

DIRECTORS.

Charles P. Howland, New York City; Wallace L. Mason, Keene, N. H.; Frederick Nichols, Thomas B. Peck, Horace A. Perry, Charles H. Slade, Frank A. Spaulding, Walpole N. H.; Clifford L. Sturtevant, Keene, N. H.; Ferdinand D. Rodenbush, Walpole, N. H.

HISTORY.

Incorporated February 17, 1903, under special law of the State of New Hampshire.

LOCALITY SERVED.

Walpole, N. H.

CAPITAL STOCK.

Preferred	\$28,000.00
Common	19,900.00
Dividends paid during year, 4%	1,120.00
Number of stockholders, 61; number in New Hampshire, 59.	
Par value of stock held in New Hampshire	42,400.00

BALANCE SHEET.

Assets.

Fixed capital:		
Cost beginning of year	\$51,567.71	
Construction and equipment current fiscal year	2,341.14	
Cost close of year		\$53,908.85
Cash and current assets:		
Cash		528.61
Materials and supplies		247.45
Total		\$54,684.91

Liabilities.

Capital liabilities:		
Capital stock—preferred	\$28,000.00	
Capital stock—common	19,900.00	
Current liabilities:		
Bills payable	1,900.00	
Surplus	4,884.91	
Total		\$54,684.91

INCOME ACCOUNT.

Operating revenues:		
Commercial sales	\$2,482.42	
Municipal hydrant rentals	500.00	
Total operating revenues		\$2,982.42

Non-operating revenues:		
Real estate rentals.....		\$37.50
Total income		\$3,019.92
Deductions from income:		
Operating expenses—		
Pumping—		
Maintenance	\$1,079.27	
General administration—		
Salaries of general officers and clerks	300.00	
General office rents, supplies and ex-		
penses	14.90	
Total	\$1,394.17	
Taxes	215.47	
Interest on unfunded debt.....	28.73	
Total deductions		1,638.37
Net income		\$1,381.55
Surplus at beginning of year.....		4,623.36
Total surplus		\$6,004.91
Dividends		1,120.00
Surplus at close of year.....		\$4,884.91

MISCELLANEOUS STATISTICS.

Plant constructed, 1904. Source of supply: Mad Brook.
Length and diameter of mains: 4 miles, 4"-10". Pressure: 60-124
pounds.
Connections: commercial services, 160; public fountains, 2.

WOODSVILLE AQUEDUCT COMPANY.

WOODSVILLE, N. H.

PRINCIPAL OFFICERS.

President, Ezra B. Mann; Treasurer, Carroll C. Rinehart; Superin-
tendent, George E. Cummings, Woodsville, N. H.

DIRECTORS.

George E. Cummings, George E. Mann, Woodsville, N. H.; Joseph M.
Howe, David Whitcher, Carrol C. Rinehart, Ezra B. Mann, Fred L. Sargent,
Woodsville, N. H.

HISTORY.

Incorporated August 25, 1885, under special law of the State of New
Hampshire. Amended: August 24, 1887.

LOCALITIES SERVED.

Haverhill (Woodsville) and Bath, N. H., and Wells River, Vt.

CAPITALIZATION.

Common stock, par value.....	\$30,000.00
Dividends paid during year.....	600.00
Number of stockholders, 22; number in New Hampshire, 13.	
Par value of stock held in New Hampshire.....	11,950.00
Funded debt, mortgage bonds, 6%.....	30,000.00

BALANCE SHEET.

Assets.

Cash and current assets:		
Cash	\$1,124.67	
Accounts receivable	2,702.25	
		<hr/>
		\$3,826.92
Special deposits		2,382.82
Property and plant.....		66,947.61
		<hr/>
Total		\$73,157.35

Liabilities.

Current liabilities:		
Accounts payable	\$942.69	
Taxes accrued	1,053.32	
Dividends payable	600.00	
		<hr/>
		\$2,596.01
Capital stock		30,000.00
Funded debt		30,000.00
Surplus		10,561.34
		<hr/>
Total		\$73,157.35

INCOME ACCOUNT.

Operating revenues:		
Water—		
Commercial sales	\$5,611.17	
Industrial sales	32.34	
Municipal hydrant rentals.....	500.00	
		<hr/>
Total—water		\$6,143.51
Electric—		
Commercial lighting	\$8,342.68	
Municipal lighting	1,203.48	
Merchandise and jobbing.....	72.45	
		<hr/>
Total—electric		9,618.61
		<hr/>
Total operating revenues.....		\$15,762.12
Operating expenses:		
Pumping—		
Miscellaneous labor	\$668.36	
Lubricants	57.75	
Miscellaneous pumping station supplies and expenses	4,687.63	
Repairs to equipment.....	6,378.68	
Fuel	1,128.61	
		<hr/>
Total	\$12,921.03	
Distribution	409.82	
General administration	612.50	
Insurance	101.00	
Taxes	1,053.32	
Interest on funded debt.....	1,200.00	
		<hr/>
Total deductions		16,297.67
		<hr/>
Net loss		\$535.55
Surplus at beginning of year.....		11,096.89
		<hr/>
Surplus at close of year.....		\$10,561.34

MISCELLANEOUS STATISTICS.

(Water.)

Plant constructed in 1887.

Method of pumping: hydraulic pump and auxiliary steam pump.

Diameter of trunk lines: 8". Diameter of street mains: 4"-6": Pressure on mains: 40-70 pounds.

Connections: commercial services, 301; hydrants, 25; public fountains, 1; water motors, 2; hydraulic elevators, 3.

Amount of water pumped during year: 219,000,000 gallons.

(Electric)

Name of municipality: Woodsville.

Number of consumers: 292.

Number of meters in service: 271.

WATER UTILITY

	Capital stock outstanding.	Funded debt outstanding.	Fixed capital— all departments.
Alpine Aqueduct Co.....	\$232.00	.....	\$232.00
Alton & Alton Bay Water Co.....	320.00	.....	32,000.00
Baker & Dearborn.....	2,000.00*	.....	2,000.00
Bath Village Water Co.....	2,000.00	.....	460.50
Bennington Water Wks. Co.....	25,000.00	.....	25,810.00
Berlin Water Co.....	100,000.00	\$175,000.00	402,876.06
Bowles, H. L.....	1,000.00*	.....	1,000.00
Bristol Aqueduct Co.....	27,500.00	.....	40,363.25
Colebrook Water Co.....	40,000.00	27,400.00	70,406.62
Coös and Essex Water Co.....	10,000.00	.....	10,000.00
Crystal Lake Water Co.....	12,000.00	.....	12,000.00
Crystal Spring Water Co.....	600.00*	.....	600.00
Dow and Carnes.....	325.00*	.....	325.00
Durham Spring Water Co.....	2,660.00*	.....	2,660.00
Epping Water Co.....	5,600.00	.....	6,879.99
Exeter Water Works.....	108,350.00	50,000.00	186,327.46
Forbush, A. B.....	6,000.00*	.....	6,000.00
Forrest, N. K.....	1,390.00*	.....	1,390.00
Fortier Aqueduct.....	3,000.00*	.....	3,000.00
Francestown Water Co.....	600.00*	.....	600.00
Franconia Water Co.....	5,000.00*	.....	5,000.00
Fryeburg Water Co.....	16,000.00	.....	34,903.76
Glen Water Co.....	2,150.00*	.....	2,150.00
Grannis Water Works.....	6,000.00*	.....	6,000.00
Gunderson, Ole.....	1,690.00*	.....	1,690.00
Hall, H. H.....	400.00*	.....	400.00
Hampton Water Works.....	37,000.00	.....	70,212.42
Hanover Aqueduct Assn.....	10,000.00	.....	10,000.00
Hanover Water Works Co.....	45,000.00	20,000.00	129,252.58
Hartford Water Co.....	75,000.00	45,000.00	120,316.43
Haverhill Aqueduct Co.....	1,600.00	.....	1,600.00
Henniker Spring Water Co.....	8,000.00	.....	8,000.00
Hill Water Works.....	11,500.00*	.....	11,500.00
Holt, John A.....	1,500.00*	.....	1,500.00
Hooksett Aqueduct Co.....	700.00*	.....	700.00
Hopkinton Village Aqueduct Assn.....	2,587.50	.....	4,500.00
Hudson Water Co.....	50,000.00	50,000.00	59,856.48
Jackson Water Works Co.....	8,500.00	.....	8,500.00
Kendrick & Davis.....	1,000.00*	.....	1,000.00
Kimball, S. O.....	1,386.48*	.....	1,386.48
Laconia Water Co.....	142,000.00	15,500.00	175,514.85
Laxson, Henry A. (a).....	2,050.00*	.....	2,050.00
Leach, N. R.....	2,500.00*	.....	2,500.00
Lisbon Water Works.....	20,000.00	.....	21,777.79
Lombard, J. E.....	1,000.00*	.....	1,000.00
Lyme Aqueduct Co.....	700.00*	.....	700.00
Mascoma Aqueduct Co.....	270.00	.....	270.00
Meriden Water Co.....	9,800.00	.....	11,171.37
Merrill, H. N.....	5,000.00*	.....	5,000.00
Mt. Crescent Water Co.....	3,200.00	.....	2,894.51
Mt. Pleasant Reservoir.....	6,600.00*	.....	6,600.00
Mt. St. Mary's Seminary.....	200.00*	.....	200.00
North Haverhill Water Co.....	2,000.00*	.....	2,000.00
Northumberland Aqueduct Company...	350.00*	.....	350.00
Ossipee Water & Electric Co.....	11,000.00	.....	16,500.00
Pennichuck Water Works.....	700,000.00	.....	832,590.96
Pittsfield Aqueduct Co.....	40,000.00	.....	40,000.00
Plains Water Supply Co.....	2,000.00*	(b)	2,000.00

STATISTICS.

Cash and current assets excluding materials and supplies.	Current liabilities.	Total operating revenues.	Total operating expenses.	Operating ratio.	Dividends declared. %
\$1,279.72	.....	\$1,605.16	\$327.30	23	4
1,596.06	\$1,770.00	1,763.17	770.09	43	3 1/2
.....	.....	435.00	133.08	30	....
.....	.....	262.00	457.51	17	....
214.25	13,110.00	1,744.97	1,572.14	90	....
6,737.40	541.03	42,592.79	33,828.41	79	....
.....	.....	295.00	106.89	36	....
2,523.88	2,552.27	2,647.01	3,519.06	132	2
1,757.21	2,175.00	5,144.70	3,406.39	66	(c)
.....	.....	1,050.00	462.00	44	(d)
588.28	.....	1,542.13	481.23	31	(e)
.....
.....	.....	106.00	11.70	11	....
40.00	.....	430.00	375.00	87	....
207.99	.....	1,685.32	764.16	45	....
10,878.39	.....	22,117.84	14,168.14	64	6
.....	.....	1,377.42	901.17	65	....
.....	1,076.28	75.00	7.00	9	....
.....	.....	121.91	162.54	133	....
.....	.....	74.50	69.50	93	....
232.70	.....	554.70	522.00	94	....
1,705.57	.....	3,149.23	782.59	24	11
.....	.....	160.50	17.13	10	....
.....	.....	283.41	140.50	49	....
.....	.....	221.00	144.18	65	....
238.85	.....	111.00	102.42	92	....
1,142.98	7,000.00	7,593.62	5,730.00	75	....
563.27	.....	878.44	268.71	30	6
10,741.69	5,992.30	6,520.36	10,646.39	163	5
20,395.90	1,321.74	9,426.82	5,032.52	53	....
212.10	.....	339.00	132.35	39	12
95.20	1,200.00	1,448.86	4,263.64	284	6
322.00	81.00	571.00	330.00	57	....
.....	.....	72.00	64.47	89	....
.....	.....	318.00	143.15	45	....
60.00	600.00	585.00	44.21	7	....
1,076.73	6,225.23	3,271.44	3,677.09	112	....
250.00	.....	752.51	592.23	78	....
.....	.....	161.25	17.20	10	....
.....	.....	160.00	8.00	5	....
10,903.44	2,476.72	29,151.38	14,689.64	53	6
.....	.....	336.00	103.00	30	....
.....	.....	289.50	70.97	24	....
627.00	.....	5,994.28	2,806.29	46	5
.....	.....	349.00	92.00	26	....
43.30	.....	222.50	109.43	49	(f)
20.37	.....	6.75	4.50	66	....
197.85	.....	310.27	561.43	180	....
.....	.....	197.00	75.00	32	....
1,046.26	.....	344.00	92.87	26	5
.....	.....	413.50	245.00	59	....
.....	.....	100.00	20.00	20	....
.....	.....	371.04	94.60	25	....
.....	.....	47.00	19.80	42	....
423.82	5,325.64	738.40	432.03	58	....
74,743.42	20,927.13	96,625.76	57,052.03	59	6
3,797.30	1,525.75	6,237.22	2,921.23	46	7
.....	.....	312.43	313.41	100	....

WATER UTILITY

	Capital stock outstanding.	Funded debt outstanding.	Fixed capital— all departments.
Robinson, Mary F.....	\$1,500.00*	.....	\$1,500.00
Shepard, C. E.....	5,000.00*	.....	5,000.00
Starrett, W. C.....	1,100.00*	.....	1,100.00
Suncook Water Works.....	100,000.00	.....	102,515.30
Tilton & Northfield Aqueduct Co.....	87,400.00	.....	89,589.21
Tyler Spring Water System.....	7,500.00*	(c)	7,500.00
United Realty Co.....	5,000.00	.....	2,500.00
Walpole Water & Sewer Co.....	47,900.00	.....	53,908.85
Woodsville Aqueduct Co.....	30,000.00	\$30,000.00	66,947.61
Total	\$1,867,660.98	\$412,900.00	\$2,737,079.48

- (a) Mortgage liability of \$2,500.00.
- (b) Mortgage liability of \$7,500.00.
- (c) Dividends declared on preferred stock, 5%.
- Dividends declared on common stock, 4%.
- (d) Dividends declared, \$588.00.
- (e) Dividends declared on No. 23, 6%.
- Dividends declared on No. 23+, 4%.
- (f) Dividends declared, \$100.

*Investment.

STATISTICS—*Concluded.*

Cash and current assets excluding materials and supplies.	Current liabilities.	Total operating revenues.	Total operating expenses.	Operating ratio.	Dividends declared. %
.....	.....	\$163.00	\$60.00	36	....
.....	.....	694.00	346.50	49	....
.....	.....	109.50	5.00	4	....
\$1,796.78	\$115.00	7,422.31	3,593.91	48	....
1,111.15	1,800.00	10,364.88	3,896.99	37	8
.....	.....	1,050.70	678.50	64	....
158.00	158.00	303.73	418.73	137	....
528.61	1,900.00	2,982.42	1,638.37	54	4
3,826.92	2,596.01	15,762.12	16,297.67	103	....
<hr/> \$162,078.39	<hr/> \$80,469.10	<hr/> \$302,546.75	<hr/> \$200,820.99	...	....

LOCALITY INDEX AND SERVICE LIST
OF
STREET RAILWAYS AND PUBLIC UTILITIES.

LOCALITY INDEX AND SERVICE LIST
OF
STREET RAILWAYS AND PUBLIC UTILITIES.

Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
Acworth	536	Lempster Tel. Co.	Tel.	..	497
		N. E. Tel. & Tel. Co.	Tel.	..	511
Albany	289	Wonalancet El. Co.	Elec.	D	412
		Madison Local Tel. Co.	Tel.	..	499
		Ossipee Valley Tel. & Tel. Co.	Tel.	..	520
		Bristol Elec. Light Co.	Elec.	C	306
Alexandria	571	Winnepesaukee Tel. Co.	Tel.	..	550
Allentown	1457	Manchester Trac., Lt. & P. Co.	Elec.	A	361
		Edward Hamel	Ferry	..	excused
		Concord & Manchester El. Br. (B. & M. R. R.)	St. Ry.	..	210
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Alstead	788	Fall Mountain Elec. Co.	Elec.	A	325
		N. E. Tel. & Tel. Co.	Tel.	..	511
Alton	1348	Alton El. Lt. & P. Co.	Elec.	D	290
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Union Tel. Co.	Tel.	..	537
		Winnepesaukee Tel. Co.	Tel.	..	550
		Alton & Alton Bay Water Co.	Water	D	572
Amherst	1060	Milford Lt. & P. Co.	Elec.	B	371
		N. E. Tel. & Tel. Co.	Tel.	..	511
Andover	1201	Kearsarge Tel. Co.	Tel.	..	493
		Winnepesaukee Tel. Co.	Tel.	..	550
Antrim	1235	Goodell Co.	Elec.	C	334
		Western Union Tlg. Co.	Tlg.	..	455
		Contoocook Valley Tel. Co.	Tel.	..	475
Ashland	1412	Ashland El. Lt. Co.	Elec.	C	292
		Western Union Tlg. Co.	Tlg.	..	455
		White Mountain Tel. & Tel. Co.	Tel.	..	545
		Winnepesaukee Tel. Co.	Tel.	..	550
Atkinson	440	Plaistow El. Lt. & P. Co.	Elec.	D	387
		Rockingham Co. Lt. & P. Co.	Elec.	A	391
		N. E. Tel. & Tel. Co.	Tel.	..	511
Auburn	637	Manchester Trac., Lt. & P. Co.	Elec.	A	361
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511

Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
Barnstead	1081	N. E. Tel. & Tel. Co.	Tel.	..	511
		Union Tel. Co.	Tel.	..	537
Barrington	900	Barrington-Strafford Tel. Co.	Tel.	..	465
		N. E. Tel. & Tel. Co.	Tel.	..	511
Bartlett	1197	Goodrich Falls Elec. Co.	Elec.	C	336
		Western Union Tlg. Co.	Tlg.	..	455
		No. Conway & Jackson Tel. Co.	Tel.	..	518
		Ossipee Valley Tel. & Tel. Co.	Tel.	..	520
		Glen Water Co.	Water	D	593
Bath	978	Lisbon Lt. & P. Co.	Elec.	C	358
		Coos Tel. Co.	Tel.	..	476
		Passumpsic Tel. Co.	Tel.	..	524
		Walbridge, F. R.	Tel.	..	540
		White Mountain Tel. & Tel. Co.	Tel.	..	545
		Bath Village Water Co.	Water	D	574
		Hall, H. H.	Water	D	594
		Woodsville Aqueduct Co.	Water	C	633
Bedford	1110	N. E. Tel. & Tel. Co.	Tel.	..	511
Belmont	1390	Laconia Gas & El. Co.	Elec.	A	351
		Western Union Telegraph Co.	Tlg.	..	455
		Citizens Tel. Co.	Tel.	..	472
		Winnepesaukee Tel. Co.	Tel.	..	545
Bennington	690	Goodell Co.	Elec.	C	334
		Contoocook Valley Tel. Co.	Tel.	..	475
		Bennington Water Works Co.	Water	D	575
		Starrett, William C.	Water	D	627
Benton	219	White Mountain Tel. & Tel. Co.	Tel.	..	545
Berlin	14000	Twin State Gas & El. Co.			
		Berlin Division	Elec.	A	399
		Berlin St. Ry.	St. Ry.	..	201
		Great North Western Tlg. Co.			
		of Canada	Tlg.	..	450
		Coos Tel. Co.	Tel.	..	476
		Berlin Water Co.	Water	A	576
		Forbush, A. B.	Water	D	588
Bethlehem	1201	Gunderson, O.	Water	D	594
		Bethlehem El. Lt. Co.	Elec.	C	302
		Western Union Tlg. Co.	Tlg.	..	455
Boscawen	1240	Coos Tel. Co.	Tel.	..	476
		Penacook El. Lt. Co.	Elec.	C	384
		Western Union Telegraph Co.	Tlg.	..	455
		Canterbury & Boscawen Tel. Co.	Tel.	..	467
		Kearsarge Tel. Co.	Tel.	..	493
Bow	676	N. E. Tel. & Tel. Co.	Tel.	..	511
		Manchester Trac., Lt. & P. Co.	Elec.	A	361
		Dunbarton Tel. Co.	Tel.	..	486
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Concord & Manchester El. Br. (B. & M. R. R.)	St. Ry.	..	210
Bradford	695	Bradford Lt. & P. Co.	Elec.	D	305
		Merrimack County Tel. Co.	Tel.	..	509

Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
Brentwood	759	Newmarket El. Co.	Elec.	B	379
		N. E. Tel. & Tel. Co.	Tel.	..	511
Bridgewater	187	Bristol El. Lt. Co.	Elec.	C	306
		Western Union Tlg. Co.	Tlg.	..	455
		White Mt. Tel. & Tel. Co.	Tel.	..	545
		Winnepesaukee Tel. Co.	Tel.	..	550
Bristol	1478	Bristol El. Lt. Co.	Elec.	C	306
		Western Union Tlg. Co.	Tlg.	..	455
		Citizens Tel. Co.	Tel.	..	472
		Winnepesaukee Tel. Co.	Tel.	..	550
		Bristol Aqueduct Co.	Water	C	578
Brookfield	247	N. E. Tel. & Tel. Co.	Tel.	..	511
		Wakefield Tel. Co.	Tel.	..	539
Brookline	501	Fessenden, Orville D.	Elec.	D	329
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Cambridge	...	Errol Hill Telephone Co.	Tel.	..	482
Campton	845	Campton El. Lt. Co.	Elec.	D	307
		White Mountain Tel. & Tel. Co.	Tel.	..	545
Canaan	1408	Canaan Elec. Co.	Elec.	D	308
		Western Union Tlg. Co.	Tlg.	..	455
		Canaan Peoples Tel. Co.	Tel.	..	excused
		Mascoma Valley Tel. Co.	Tel.	..	501
		Crystal Lake Water Co.	Water	D	583
Candia	993	Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Holt, John A.	Water	D	604
Canterbury	680	Canterbury & Boscawen Tel. Co.	Tel.	..	467
		Citizens Tel. Co.	Tel.	..	472
Carroll	569	Western Union Tlg. Co.	Tlg.	..	455
		Coos Tel. Co.	Tel.	..	476
Center Harbor	420	*Meredith El. Lt. Co.	Elec.	C	369
		Western Union Tlg. Co.	Tlg.	..	455
		Citizens Tel. Co.	Tel.	..	472
		White Mountain Tel. & Tel. Co.	Tel.	..	545
		Winnepesaukee Tel. Co.	Tel.	..	550
Charlestown	1473	Fall Mountain El. Co.	Elec.	A	325
		Springfield El. Ry. Co. of N. H.	St. Ry.	..	258
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Cheshire Bridge Company	Toll	..	560
Chatham	209	Cold River Tel. Co.	Tel.	..	474
Chester	818	Chester & Derry R. R. Assn.	St. Ry.	..	203
		American Tlg. Co.	Tlg.	..	409
		Chester & Derry Tel. & Tel. Co.	Tel.	..	469
		N. E. Tel. & Tel. Co.	Tel.	..	511

*Authorized July, 1915, to purchase Center Harbor Elec. Co., 308.

Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
Chesterfield	770	*Keene Gas & El. Co.	Elec.	A	347
		New England Tel. & Tel. Co.	Tel.	..	511
Chichester	606	Chichester Tel. Co.	Tel.	..	471
		N. E. Tel. & Tel. Co.	Tel.	..	511
Claremont	7529	Claremont Power Co.	Elec.	A	310
		Claremont Gas Light Co.	Gas	B	421
		Claremont Ry. & Ltg. Co.	St. Ry.	..	207
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Grannis Water Works	Water	D	593
		Tyler Spring Water System	Water	D	630
Clarksville	271	Coos Tel. Co.	Tel.	..	476
Colebrook	1905	Allen, William F. Co.	Elec.	C	288
		Coos Tel. Co.	Tel.	..	476
		Southern Coos Tel. Co.	Tel.	..	533
		Colebrook Water Co.	Water	C	580
		Lombard, J. E.	Water	D	614
Columbia	619	Coos Tel. Co.	Tel.	..	476
Concord	21497	Concord El. Co.	Elec.	A	314
		Penacook El. Lt. Co.	Elec.	C	384
		Concord Lt. & P. Co.	Gas	A	425
		Concord & Manchester El. Br. (B. & M. R. R.)	St. Ry.	..	210
		Postal Telegraph Cable Co.	Tlg.	..	453
		Western Union Telegraph Co.	Tlg.	..	455
		Canterbury & Boscawen Tel. Co.	Tel.	..	467
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Crystal Spring Water Co.	Water	D	584
		Plains Water Supply Co.	Water	D	626
		Robinson, Mary F., Water Utility	Water	D	626
Conway	3413	Goodrich Falls El. Co.	Elec.	C	336
		Western Union Tlg. Co.	Tlg.	..	455
		Cold River Tel. Co.	Tel.	..	474
		No. Conway & Jackson Tel. Co.	Tel.	..	518
		Ossipee Valley Tel. & Tel. Co.	Tel.	..	520
		Fryeburg Water Co.	Water	C	591
Cornish	1005	Windsor El. Lt. Co.	Elec.	C	411
		Cornish Flat Tel. Co.	Tel.	..	479
		Meriden Tel. Co.	Tel.	..	507
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Cornish Bridge Co.	Toll	..	561
Croydon	324	N. E. Tel. & Tel. Co.	Tel.	..	511
		Sugar River Valley Tel. Co.	Tel.	..	535
		Sunapee Tel. Co.	Tel.	..	536
Dalton	475	Western Union Tlg. Co.	Tlg.	..	455
		Coos Tel. Co.	Tel.	..	476
Danbury	592	Western Union Tlg. Co.	Tlg.	..	455
		Mascoma Valley Telephone Co.	Tel.	..	501
		Winnepesaukee Tel. Co.	Tel.	..	550
Danville	517	Plaistow El. Lt. & P. Co.	Elec.	D	387
		N. E. Tel. & Tel. Co.	Tel.	..	511

*Operating property of Ashuelot Gas & Electric Co., 294.

Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
Dartmouth College Grant	11	Coos Telephone Co.	Tel.	..	476
Deerfield	917	N. E. Tel. & Tel. Co.	Tel.	..	511
Deering	353	Contoocook Valley Tel. Co.	Tel.	..	475
		Henniker Tel. Co.	Tel.	..	489
		Weare Tel. Co.	Tel.	..	542
Derry	6500	Derry El. Co.	Elec.	B	321
		Chester & Derry R. R. Assn.	St. Ry.	..	203
		Manchester & Derry St. Ry.	St. Ry.	..	236
		Western Union Tlg. Co.	Tlg.	..	455
		Chester & Derry Tel. & Tel. Co.	Tel.	..	469
		N. E. Tel. & Tel. Co.	Tel.	..	511
Dorchester	241	Mascoma Valley Tel. Co.	Tel.	..	501
		White Mountain Tel. & Tel. Co.	Tel.	..	545
Dover	14000	Twin State Gas & El. Co., Dover Division	Elec.	A	403
		Rockingham County Lt. & P. Co.	Elec.	A	391
		Twin State Gas & El. Co., Dover Division	Gas	B	403
		Atlantic Shore Railway	St. Ry.	..	193
		Dover, Somersworth & Roches- ter St. Ry.	St. Ry.	..	213
		Postal Tlg. Cable Co.	Tlg.	..	453
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Dover Point Bridge (B. & M. R. R.)	Toll	..	561
		Eliot Bridge (Atlantic Sh. Ry.)	Toll	..	562
Dublin	571	*Keene Gas & Elec. Co.	Elec.	A	347
		American Telegraph Co.	Tlg.	..	449
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Dummer	292	Coos Tel. Co.	Tel.	..	476
Dunbarton	513	Dunbarton Tel. Co.	Tel.	..	480
Durham	823	Newmarket El. Co.	Elec.	B	379
		Rockingham Co. Lt. & P. Co.	Elec.	A	391
		Western Union Telegraph Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Durham Spring Water Co.	Water	D	585
East Kingston	413	Exeter & Hampton El. Co.	Elec.	B	323
		Rockingham Co. Lt. & P. Co.	Elec.	A	391
		Western Union Telegraph Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Easton	226	White Mountain Tel. & Tel. Co.	Tel.	..	545
Eaton	380	Ossipee Valley Tel. & Tel. Co.	Tel.	..	520
Effingham	588	Ossipee Valley Tel. & Tel. Co.	Tel.	..	520
		Pine River Tel. Co.	Tel.	..	529

*Operating property of Ashuelot Gas & Electric Co., 294.

Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
Enfield	1448	American Woolen Co.	Elec.	D	291
		Canaan Elec. Co.	Elec.	D	excused
		Mascoma Valley Tel. Co.	Tel.	..	501
		Western Union Tlg. Co.	Tlg.	..	455
Epping	1649	Newmarket El. Co.	Elec.	B	379
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Epping Water Co.	Water	D	585
Epsom	725	Western Union Tlg. Co.	Tlg.	..	455
		Chichester Tel. Co.	Tel.	..	471
		N. E. Tel. & Tel. Co.	Tel.	..	511
Errol	211	Coos Tel. Co.	Tel.	..	476
		Errol Hill Tel. Co.	Tel.	..	482
		Leach, N. R.	Water	D	612
Exeter	4897	Exeter & Hampton El. Co.	Elec.	B	323
		Exeter Gas Lt. Co.	Gas	B	428
		Exeter, Hampton & Amesbury St. Ry.	St. Ry.	..	218
		Western Union Telegraph Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Exeter Water Works	Water	B	586
Farmington	2621	Cloutman Gas & El. Co.	Elec.	C	312
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Union Tel. Co.	Tel.	..	537
		Mount Pleasant Reservoir	Water	D	619
Fitzwilliam	1148	N. H. Water & El. P. Co. of N. H.	Elec.	C	377
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Francestown	602	New Boston & Francestown Tel. Co.	Tel.	..	510
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Francestown Water Co.	Water	D	590
Franconia	504	Bethlehem El. Lt. Co.	Elec.	C	302
		White Mountain Tel. & Tel. Co.	Tel.	..	545
		Franconia Water Co.	Water	D	591
Franklin	6132	Franklin Lt. & P. Co.	Elec.	B	331
		Franklin Lt. & P. Co.	Gas	D	331
		Western Union Tlg. Co.	Tlg.	..	455
		Citizens Tel. Co.	Tel.	..	472
		Kearsarge Tel. Co.	Tel.	..	493
		Winnepesaukee Tel. Co.	Tel.	..	550
		Madison Local Telephone Co.	Tel.	..	499
Freedom	481	Ossipee Valley Tel. & Tel. Co.	Tel.	..	520
Fremont	622	Western Union Telegraph Co.	Tlg.	..	455
		Spaulding & Frost Co.	Elec.	D	396
		N. E. Tel. & Tel. Co.	Tel.	..	511
Gilford	774	Laconia Gas & El. Co.	Elec.	A	351
		Citizens Tel. Co.	Tel.	..	472
		Winnepesaukee Tel. Co.	Tel.	..	550
Gilmanton	968	N. E. Tel. & Tel. Co.	Tel.	..	511
		Union Tel. Co.	Tel.	..	537
		Winnepesaukee Tel. Co.	Tel.	..	550

Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
Gilsum	470	N. E. Tel. & Tel. Co.	Tel.	..	511
Goffstown	2579	Manchester Trac., Lt. & P. Co.	Elec.	A	361
		Manchester St. Ry.	St. Ry.	..	231
		Uncanoonuc Incline Ry. & De- velopment Co.	St. Ry.	..	263
		Dunbarton Tel. Co.	Tel.	..	480
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Western Union Telegraph Co.	Tlg.	..	455
		Laxson, Henry A.	Water	D	611
Gorham	2155	Twin State Gas & El. Co., Berlin Division	Elec.	A	399
		Berlin St. Ry.	St. Ry.	..	201
		Great North Western Tlg. Co. of Canada	Tlg.	..	450
		Coos Tel. Co.	Tel.	..	476
		Alpine Aqueduct Co.	Water	D	571
		Berlin Water Co.	Water	A	576
Goshen	329	N. E. Tel. & Tel. Co.	Tel.	..	511
		Sunapee Tel. Co.	Tel.	..	536
		Washington & Cherry Val. Tel.	Tel.	...	541
Grafton	641	Western Union Telegraph Co.	Tlg.	..	455
		Martin, Leon H.	Tel.	..	501
		Grafton Local Tel. Line	Tel.	..	488
		Mascoma Valley Tel. Co.	Tel.	..	501
Grantham	286	Sugar River Valley Tel. Co.	Tel.	..	535
Greenfield	600	Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Greenland	575	Rockingham Co. Lt. & P. Co.	Elec.	A	391
		Portsmouth El. Ry. (B. & M. R. R.)	St. Ry.	..	256
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Greenville	1374	Greenville El. Ltg. Co.	Elec.	C	337
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Groton	319	Mascoma Valley Tel. Co.	Tel.	..	501
		White Mountain Tel. & Tel. Co.	Tel.	..	545
Hampstead	796	Plaistow El. Lt. & P. Co.	Elec.	D	387
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Hampton	1209	Exeter & Hampton El. Co.	Elec.	B	323
		Rockingham Co. Lt. & P. Co.	Elec.	A	391
		Exeter, Hampton & Amesbury St. Ry.	St. Ry.	..	218
		Mass. N. E. St. Ry. Co.	St. Ry.	..	244
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Hampton River Bridge (Mass. N. E. St. Ry. Co.)	Toll	..	563
		Hampton Water Works Co.	Water	O	595

Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
Hampton Falls	560	Exeter & Hampton El. Co.	Elec.	B	323
		Rockingham Co. Lt. & P. Co.	Elec.	A	391
		Exeter, Hampton & Amesbury St. Ry.	St. Ry.	..	218
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Hampton River Bridge (Mass. N. E. St. Ry. Co.)	Toll	..	563
Hancock	642	Goodell Company	Elec.	C	334
Hanover	2240	Mascoma El. Lt. & Gas Co.	Elec.	B	366
		Etna Tel. Co.	Tel.	..	483
		Etna & Hanover Center Tel. Co.	Tel.	..	484
		Lake Morey Tel. & Tel. Co.	Tel.	..	495
		Lyme Peoples Tel. Co.	Tel.	..	498
		Mascoma Valley Tel. Co.	Tel.	..	501
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Hanover Aqueduct Assn.	Water	D	597
		Hanover Water Works Co.	Water	C	598
Harrisville	791	*Keene Gas & El. Co.	Elec.	A	347
		American Tlg. Co.	Tlg.	..	449
		N. E. Tel. & Tel. Co.	Tel.	..	511
Hart's Location	85	Western Union Tlg. Co.	Tlg.	..	455
		Livermore Tel. Co.	Tel.	..	497
		Ossipee Valley Tel. Co.	Tel.	..	520
Haverhill	3498	Bradford El. Ltg. Co.	Elec.	C	303
		Woodsville Aqueduct Co.	Elec.	C	633
		Western Union Tlg. Co.	Tlg.	..	455
		Bradford Tel. & Tel. Co.	Tel.	..	466
		Piermont Tel. Co.	Tel.	..	528
		Walbridge, F. L.	Tel.	..	540
		White Mountain Tel. & Tel. Co.	Tel.	..	545
		Bedell Bridge Co.	Toll	..	559
		Woodsville Bridge (B. & M. R. R.)	Toll	..	567
		Haverhill Aqueduct Co.	Water	D	601
		North Haverhill Water Co.	Water	D	620
		Woodsville Aqueduct Co.	Water	C	633
Hebron	213	Winnetesaukee Tel. Co.	Tel.	..	550
Henniker	1395	Hillsboro El. Lt. & P. Co.	Elec.	C	342
		Western Union Tlg. Co.	Tlg.	..	455
		Contoocook Valley Tel. Co.	Tel.	..	475
		Henniker Tel. Co.	Tel.	..	489
		Dow & Carnes	Water	D	584
Hill	556	Hill Lt. & P. Co.	Elec.	D	341
		Western Union Tlg. Co.	Tlg.	..	455
		Citizens Tel. Co.	Tel.	..	472
		Winnetesaukee Tel. Co.	Tel.	..	550
		Hill Water Works	Water	D	603
Hillsborough	2168	Hillsboro El. Lt. & P. Co.	Elec.	C	342
		Western Union Tlg. Co.	Tlg.	..	455
		Contoocook Valley Tel. Co.	Tel.	..	475
		Henniker Tel. Co.	Tel.	..	489
		Washington & Cherry Valley Tel. Co.	Tel.	..	541

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Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
Hinsdale	1673	Connecticut River Power Co.	Elec.	A	316
		*Keene Gas & Electric Co.	Elec.	A	347
		Twin State Gas & Elec. Co., Brattleboro Div.	Elec.	A	400
		American Tlg. Co.	Tlg.	..	449
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Holderness	652	Plymouth El. Lt. Co.	Elec.	C	388
		White Mountain Tel. & Tel. Co.	Tel.	..	545
		Winnepesaukee Tel. Co.	Tel.	..	550
Hollis	935	Hollis Tel. Co.	Tel.	..	490
		N. E. Tel. & Tel. Co.	Tel.	..	511
Hooksett	1528	Manchester Trac., Lt. & P. Co.	Elec.	A	361
		Hamel, Edward	Ferry	..	excused
		Concord & Manchester El. Br. (B. & M. R. R.)	St. Ry.	..	210
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Hooksett Aqueduct Co.	Water	D	604
		Mt. St. Mary Seminary	Water	D	619
Hopkinton	1578	Contoocook El. Lt. Co.	Elec.	C	319
		Dunbarton Tel. Co.	Tel.	..	480
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Weare Tel. Co.	Tel.	..	542
		West Hopkinton Tel. Co.	Tel.	..	544
		Hopkinton Village Aqueduct Assn.	Water	D	605
Hudson	1344	Nashua Light, Heat & P. Co.	Elec.	A	373
		Bay State St. Ry. Co.	St. Ry.	..	198
		Manchester & Nashua St. Ry.	St. Ry.	..	239
		Mass. N. E. St. Ry. Co.	St. Ry.	..	244
		Hudson Center & West Wind- ham Tel. Co.	Tel.	..	491
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Hudson Water Works Co.	Water	C	606
Jackson	452	Goodrich Falls El. Co.	Elec.	C	336
		Wentworth Hall El. Lt. Co.	Elec.	D	409
		Western Union Tlg. Co.	Tlg.	..	455
		No. Conway & Jackson Tel. Co.	Tel.	..	518
		Ossipee Valley Tel. & Tel. Co.	Tel.	..	520
		Jackson Water Works Co.	Water	D	607
Jaffrey	1895	Jaffrey & Troy El. Lt. Co.	Elec.	C	344
		Western Union Telegraph Co.	Tlg.	..	455
		Annett Tel. Line	Tel.	..	464
		N. E. Tel. & Tel. Co.	Tel.	..	511
Jefferson	1061	Western Union Tlg. Co.	Tlg.	..	455
		Coos Tel. Co.	Tel.	..	476
		Jefferson Tel. Co.	Tel.	..	492
Keene	10068	Keene Gas & El. Co.	Elec.	A	347
		Keene Gas & El. Co.	Gas	B	347
		Keene El. Ry. Co.	St. Ry.	..	223
		American Tlg. Co.	Tlg.	..	449
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511

*Operating property of Ashuelot Gas & Electric Co., 294.

Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
Kensington	417	Rockingham Co. Lt. & P. Co.	Elec.	A	391
		N. E. Tel. & Tel. Co.	Tel.	..	511
Kingston	1015	Exeter & Hampton El. Co.	Elec.	B	323
		Rockingham Co. Lt. & P. Co.	Elec.	A	391
		Postal Tlg. Cable Co.	Tlg.	..	453
		N. E. Tel. & Tel. Co.	Tel.	..	511
Laconia	10183	Laconia Gas & Elec. Co.	Elec.	A	351
		Laconia Gas & Elec. Co.	Gas	B	351
		Laconia St. Ry.	St. Ry.	..	227
		Western Union Tlg. Co.	Tlg.	..	455
		Citizens Tel. Co.	Tel.	..	472
		Winnepesaukee Tel. Co.	Tel.	..	550
		Laconia Water Co.	Water	B	609
Lancaster	3054	Jones & Linscott El. Co.	Elec.	C	345
		Lancaster & Jefferson El. Co.	Elec.	C	354
		Western Union Tlg. Co.	Tlg.	..	455
		Coos Tel. Co.	Tel.	..	476
Landaff	523	Lisbon Lt. & P. Co.	Elec.	C	358
		Coos Tel. Co.	Tel.	..	476
		White Mountain Tel. & Tel. Co.	Tel.	..	550
		Lisbon Water Works Co.	Water	C	613
Langdon	340	Fall Mountain Elec. Co.	Elec.	A	325
		N. E. Tel. & Tel. Co.	Tel.	..	511
Lebanon	5714	Lebanon El. Lt. & Power Co.	Elec.	B	356
		Mascoma El. Lt. & Gas Co.	Elec.	B	366
		Western Union Tlg. Co.	Tlg.	..	455
		Etna Tel. Co.	Tel.	..	483
		Etna & Hanover Center Tel. Co.	Tel.	..	484
		Lake Morey Tel. & Tel. Co.	Tel.	..	495
		Mascoma Valley Tel. Co.	Tel.	..	501
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Hartford Water Co.	Water	C	600
Lee	479	Kendrick & Davis Co.	Water	D	608
		N. E. Tel. & Tel. Co.	Tel.	..	511
Lempster	383	Tel. Company of Nottingham	Tel.	..	520
		Lempster Tel. Co.	Tel.	..	497
Lincoln	1278	Fox & Putnam	Elec.	D	330
		J. E. Henry & Sons Co.	Elec.	C	340
		Western Union Tlg. Co.	Tlg.	..	455
		White Mountain Tel. & Tel. Co.	Tel.	..	545
Lisbon	2460	Lisbon Lt. & P. Co.	Elec.	C	358
		Western Union Tlg. Co.	Tlg.	..	455
		Coos Tel. Co.	Tel.	..	476
		White Mountain Tel. & Tel. Co.	Tel.	..	545
		Lisbon Water Works Co.	Water	C	613
Litchfield	255	Manchester Trac., Lt. & P. Co.	Elec.	A	361
		Manchester & Nashua St. Ry.	St. Ry.	..	239
		Postal Tlg. Cable Co.	Tlg.	..	453
		N. E. Tel. & Tel. Co.	Tel.	..	511
Littleton	4069	Western Union Tlg. Co.	Tlg.	..	455
		Coos Tel. Co.	Tel.	..	476
		Littleton Bridge Co.	Toll	..	excused

Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
Livermore	120	Livermore Tel. Co.	Tel.	..	497
Londonderry	1533	Derry El. Lt. & P. Co.	Elec.	B	321
		Manchester Tr., Lt. & P. Co.	Elec.	A	361
		Manchester & Derry St. Ry.	St. Ry.	..	236
		Hudson Center & W. Windham Tel. Co.	Tel.	..	491
		N. E. Tel. & Tel. Co.	Tel.	..	511
Loudon	838	Loudon El. Plant	Elec.	D	359
		Canterbury & Boscawen Tel. Co.	Tel.	..	467
		Chichester Tel. Co.	Tel.	..	471
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Winnepesaukee Tel. Co.	Tel.	..	550
Lyman	374	Coos Tel. Co.	Tel.	..	476
Lyme	1007	Fairlee Tel. Co.	Tel.	..	485
		Lyme Peoples Tel. Co.	Tel.	..	498
		Lyme Aqueduct Co.	Water	D	615
Lyndeborough	660	Wilton Tel. Co.	Tel.	..	548
Madbury	331	Rockingham Co. Lt. & P. Co.	Elec.	A	391
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Madison	507	Madison Local Tel. Co.	Tel.	..	499
		Ossipee Valley Tel. & Tel. Co.	Tel.	..	520
		Forrest, N. K.	Water	D	589
Manchester	70,063	Manchester Trac., Lt. & P. Co.	Elec.	A	361
		Peoples Gas Lt. Co.	Gas	A	433
		Manchester St. Ry.	St. Ry.	..	231
		Manchester & Derry St. Ry.	St. Ry.	..	236
		Manchester & Nashua St. Ry.	St. Ry.	..	239
		Postal Telegraph Cable Co.	Tlg.	..	453
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Marlborough	1,478	*Keene Gas & Elec. Co.	Elec.	A	347
		Marlboro El. Lt. & P. Co.	Elec.	C	365
		Keene Elec. Ry. Co.	St. Ry.	..	222
		American Tlg. Co.	Tlg.	..	449
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Fortier Aqueduct Co.	Water	D	589
Marlow	425	Craig, R. F.	Elec.	D	320
		N. E. Tel. & Tel. Co.	Tel.	..	511
Mason	385	N. E. Tel. & Tel. Co.	Tel.	..	511
Meredith	1,713	Meredith El. Lt. Co.	Elec.	C	369
		Western Union Tlg. Co.	Tlg.	..	455
		Citizens Tel. Co.	Tel.	..	472
		White Mountain Tel. & Tel. Co.	Tel.	..	545
		Winnepesaukee Tel. Co.	Tel.	..	550
Merrimack	1,234	Manchester Trac., Lt. & P. Co.	Elec.	A	361
		Western Union Telegraph Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		United Realty Co.	Water	D	631

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Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
Middleton	300	N. E. Tel. & Tel. Co.	Tel.	..	511
Milan	1,135	Twin State Gas & Elec. Co., Berlin Division	Elec.	A	399
		Great North Western Tlg. Co. of Canada	Tlg.	..	450
		Ammonoosuc Tel. Co.	Tel.	..	463
		Coos Tel. Co.	Tel.	..	476
Milford	4100	Milford Lt. & P. Co.	Elec.	B	371
		Western Union Telegraph Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Wilton Tel. Co.	Tel.	..	548
Milton	1545	Western Union Telegraph Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Monroe	429	McIndoe Falls Lt. & P. Co.	Elec.	D	368
		Passumpsic Tel. Co.	Tel.	..	524
		Lyman Bridge Co.	Toll	..	563
		Stevens Village Bridge Co.	Toll	..	excused
Mont Vernon	453	Milford Lt. & P. Co.	Elec.	B	371
		N. E. Tel. & Tel. Co.	Tel.	..	511
Moultonborough	901	N. E. Tel. & Tel. Co.	Tel.	..	511
		Sandwich Local Tel. Co.	Tel.	..	531
		Winnepesaukee Tel. Co.	Tel.	..	550
Nashua	23,898	Nashua Light, Heat & P. Co.	Elec.	A	373
		Nashua Light, Heat & P. Co.	Gas	A	373
		Bay State St. Ry. Co.	St. Ry.	..	198
		Postal Telegraph Cable Co.	Tlg.	..	453
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Pennichuck Water Works	Water	A	622
Nelson	231	Merrill, Charles H.	Tel.	..	508
		N. E. Tel. & Tel. Co.	Tel.	..	511
New Boston	982	Manchester Trac., Lt. & P. Co.	Elec.	A	361
		Western Union Tlg. Co.	Tlg.	..	455
		New Boston & Francetown Tel. Co.	Tel.	..	510
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Weare Tel. Co.	Tel.	..	542
Newbury	402	Merrimack County Tel. Co.	Tel.	..	509
		Sunapee Tel. Co.	Tel.	..	536
		Bowles, Henry L.	Water	D	578
Newcastle	624	Rockingham Co. Lt. & P. Co.	Elec.	A	391
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Newcastle Bridge (David Urch, Lessee)	Toll.	..	564-565
New Durham	523	Alton El. Lt. & P. Co.	Elec.	D	290
		Union Tel. Co.	Tel.	..	537
Newfields	503	Newmarket El. Co.	Elec.	B	379
		N. E. Tel. & Tel. Co.	Tel.	..	511

Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
New Hampton	821	Bristol Electric Light Co.	Elec.	C	306
		New Hampton El. Lt. & P. Co.	Elec.	D	378
		Citizens Tel. Co.	Tel.	..	472
		White Mountain Tel. & Tel. Co.	Tel.	..	545
		Winnepesaukee Tel. Co.	Tel.	..	550
Newington	296	Rockingham Co. Lt. & P. Co.	Elec.	A	391
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Dover Point Bridge (B. & M. R. R.)	Toll	..	561
New Ipswich	927	Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
New London	805	New London Acetylene Co.	Gas	D	431
		Kearsarge Tel. Co.	Tel.	..	493
		Sunapee Tel. Co.	Tel.	..	536
		Shepard, Charles E.	Water	D	627
Newmarket	3348	Newmarket Elec. Co.	Elec.	B	379
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Newport	3734	Newport El. Lt. Co.	Elec.	B	382
		Sunapee El. Lt. & P. Co.	Elec.	C	396
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Washington & Cherry Valley Tel. Co.	Tel.	..	541
Newton	962	Exeter & Hampton El. Co.	Elec.	B	323
		Mass. N. E. St. Ry.	St. Ry.	..	244
		N. E. Tel. & Tel. Co.	Tel.	..	511
Northfield	1474	Tilton El. Lt. & P. Co.	Elec.	C	398
		Canterbury & Boscawen Tel. Co.	Tel.*	..	467
		Winnepesaukee Tel. Co.	Tel.	..	550
		Tilton & Northfield Aqueduct Co.	Water	C	629
North Hampton	783	Rockingham County Lt. & P. Co.	Elec.	A	391
		Portsmouth El. Ry.	St. Ry.	..	256
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Hampton Water Works Co.	Water	C	595
Northumberland	2184	Groveton El. Lt. Co.	Elec.	C	338
		Lyman Falls Power Co.	Elec.	B	360
		Great North Western Tlg. Co. of Canada	Tlg.	..	450
		Western Union Tlg. Co.	Tlg.	..	455
		Ammonoosuc Tel. Co.	Tel.	..	463
		Coos Tel. Co.	Tel.	..	476
		Southern Coos Tel. Co.	Tel.	..	533
		Northumberland Bridge Co.	Toll	..	566
		Northumberland Aqueduct Co.	Water	D	620
Northwood	1059	N. E. Tel. & Tel. Co.	Tel.	..	511
Nottingham	607	N. E. Tel. & Tel. Co.	Tel.	..	511
		Tel. Company of Nottingham	Tel.	..	520
Orange	176	Mascoma Valley Tel. Co.	Tel.	..	501

Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
Orford	799	Bradford El. Ltg. Co.	Elec.	C	303
		Bradford Tel. & Tel. Co.	Tel.	..	466
		Fairlee & Wentworth Tel. Co.	Tel.	..	486
		Lyme Peoples Tel. Co.	Tel.	..	198
		Piermont Tel. Co.	Tel.	..	528
Ossipee	1354	Western Union Tlg. Co.	Tlg.	..	455
		Fairmount Tel. Co.	Tel.	..	487
		Ossipee Valley Tel. & Tel. Co.	Tel.	..	520
		Ossipee Water & El. Co.	Water	D	621
Pelham	825	Mass. N. E. St. Ry.	St. Ry.	..	244
		Hudson Center & West Windham Tel. Co.	Tel.	..	491
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Pelham Association	Tel.	..	527
Pembroke	3062	Manchester Trac., Lt. & P. Co.	Elec.	A	361
		Concord & Manchester El. Br. (B. & M. R. R.)	St. Ry.	..	210
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Baker & Dearborn	Water	D	573
Peterborough	2277	*Keene Gas & El. Co.	Elec.	A	347
		American Tlg. Co.	Tlg.	..	449
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Piermont	592	Bradford El. Ltg. Co.	Elec.	C	303
		Bradford Tel. & Tel.	Tel.	..	466
		Piermont Tel. Co.	Tel.	..	528
		White Mountain Tel. & Tel. Co.	Tel.	..	545
Pittsburg	624	Baldwin, Frank W.	Elec.	D	296
		Coos Tel. Co.	Tel.	..	476
Pittsfield	2222	Pittsfield Lt. & P. Co.	Elec.	C	386
		Pittsfield Gas Co.	Gas	D	436
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Pittsfield Aqueduct Co.	Water	C	624
Plainfield	987	Mascoma El. Lt. & Gas Co.	Elec.	B	366
		Meriden El. Lt. & P. Co.	Elec.	D	370
		Windsor El. Lt. Co.	Elec.	C	411
		Mascoma Valley Tel. Co.	Tel.	..	501
		Meriden Tel. Co.	Tel.	..	507
		N. E. Tel. & Tel. Co.	Tel.	..	511
Plaistow	1173	Meriden Water Co.	Water	D	616
		Plaistow El. Lt. & P. Co.	Elec.	D	387
		Rockingham County Lt. & P. Co.	Elec.	A	391
		Mass. N. E. St. Ry.	St. Ry.	..	244
		Western Union Tlg. Co.	Tlg.	..	455
Plymouth	2200	N. E. Tel. & Tel. Co.	Tel.	..	511
		Plymouth El. Lt. Co.	Elec.	C	388
		Western Union Tlg. Co.	Tlg.	..	455
		White Mountain Tel. & Tel. Co.	Tel.	..	545

*Operating property of Ashuelot Gas & Electric Co., 294.

Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
Portsmouth	11269	Rockingham County Lt. & P. Co.	Elec.	A	391
		Portsmouth Gas Co.	Gas	A	437
		Atlantic Shore Ry.	St. Ry.	..	193
		Portsmouth El. Ry. (B. & M. R. R.)	St. Ry.	..	256
		Postal Telegraph Cable Co.	Tlg.	..	453
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Portsmouth Bridge	Toll	..	567
		Newcastle Bridge (David Urch Lessee)	Toll	..	564-565
Randolph	137	Coos Tel. Co.	Tel.	..	476
		Mount Crescent Water Co.	Water	D	618
Raymond	1200	Raymond El. Co.	Elec.	C	390
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Hampton Water Works Co.	Water	C	595
Richmond	393	N. E. Tel & Tel. Co.	Tel.	..	511
Rindge	706	Annett Tel. Line	Tel.	..	464
		N. E. Tel. & Tel. Co.	Tel.	..	511
Rochester	8868	Twin State Gas & El. Co.			
		Dover Division	Elec.	A	403
		Strafford-York Gas Co.	Gas	B	440
		Dover, Somersworth & Rochester St. Ry.	St. Ry.	..	213
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Rollinsford	1836	*Berwick & Salmon Falls Elec. Co.	Elec.	C	300
		Twin State Gas & El. Co., Dover Division	Elec.	A	403
		Postal Tlg. Cable Co.	Tlg.	..	453
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Roxbury	66	N. E. Tel. & Tel. Co.	Tel.	..	511
Rumney	900	Rumney El. Lt. Co.	Elec.	D	394
		White Mountain Tel. & Tel. Co.	Tel.	..	545
Rye	1014	Rockingham County Lt. & P. Co.	Elec.	A	391
		Portsmouth El. Ry. (B. & M. R. R.)	St. Ry.	..	256
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Shoals Cable Co.	Tel.	..	532
		Hampton Water Works Co.	Water	C	595
Salem	2117	Rockingham County Lt. & P. Co.	Elec.	A	391
		Salem El. Lt. Co.	Elec.	C	395
		Mass. N. E. St. Ry. Co.	St. Ry.	..	244
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Salisbury	478	Kearsarge Tel. Co.	Tel.	..	493
		Winnepesaukee Tel. Co.	Tel.	..	550

*Operated by Twin State Gas & Electric Co.

Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
Sanbornton	850	Laconia Gas & El. Co.	Elec.	A	351
		Citizens Tel. Co.	Tel.	..	472
		Winnepesaukee Tel. Co.	Tel.	..	550
Sandown	400	Sandown Tel. Co.	Tel.	..	529
Sandwich	928	Wonalancet El. Co.	Elec.	D	412
		Ossipee Valley Tel. & Tel. Co.	Tel.	..	520
		Sandwich Local Tel. Co.	Tel.	..	531
		White Mountain Tel. & Tel. Co.	Tel.	..	545
Seabrook	1425	Winnepesaukee Tel. Co.	Tel.	..	550
		Exeter & Hampton El. Co.	Elec.	B	323
		Rockingham County Lt. & P. Co.	Elec.	A	391
		Exeter, Hampton & Amesbury St. Ry.	St. Ry.	..	218
		Mass. N. E. St. Ry.	St. Ry.	..	244
		Postal Telegraph Cable Co.	Tlg.	..	453
		Western Union Tlg. Co.	Tlg.	..	455
		New England Tel. & Tel. Co.	Tel.	..	511
		Hampton River Bridge (Mass. N. E. St. Ry.)	Toll	..	563
Sharon	75	N. E. Tel. & Tel. Co.	Tel.	..	511
Shelburne	305	Great North Western Tlg. Co. of Canada	Tlg.	..	450
		Coos Tel. Co.	Tel.	..	476
Somersworth	6708	Twin State Gas & Elec. Co.			
		Dover Division	Elec.	A	403
		Strafford-York Gas Co.	Gas	B	440
		Dover, Somersworth & Roches- ter St. Ry.	St. Ry.	..	213
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
South Hampton	279	Rockingham Co. Lt. & P. Co.	Elec.	A	391
		Mass. N. E. St. Ry. Co.	St. Ry.	..	244
		N. E. Tel. & Tel. Co.	Tel.	..	511
Springfield	422	Kearsarge Tel. Co.	Tel.	..	493
		Sugar River Valley Tel. Co.	Tel.	..	535
		Sunapee Tel. Co.	Tel.	..	536
Stark	448	Great North Western Telegraph Co. of Canada	Tlg.	..	450
		Ammonoosuc Tel. Co.	Tel.	..	463
		Coos Tel. Co.	Tel.	..	476
Stewartstown	1128	Allen, Wm. F. Co.	Elec.	C	288
		Coos Tel. Co.	Tel.	..	476
Stoddard	257	Merrill, Charles H.	Tel.	..	508
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Stoddard Tel. Co.	Tel.	..	excused
Strafford	786	Barrington-Strafford Tel. Co.	Tel.	..	465
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Union Tel. Co.	Tel.	..	537

Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
Stratford	844	Groveton El. Lt. Co.	Elec.	C	338
		Lyman Falls Power Co.	Elec.	B	360
		Great North Western Tlg. Co. of Canada	Tlg.	..	450
		Western Union Tlg. Co.	Tlg.	..	455
		Coos Tel. Co.	Tel.	..	476
		Southern Coos Tel. Co.	Tel.	..	533
		Coos & Essex Water Co.	Water	D	582
Stratham	602	Exeter & Hampton El. Co.	Elec.	B	323
		N. E. Tel. & Tel. Co.	Tel.	..	511
Sullivan	266	N. E. Tel. & Tel. Co.	Tel.	..	511
Sunapee	1070	Sunapee El. Lt. & P. Co.	Elec.	C	396
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Sunapee Tel. Co.	Tel.	..	536
Surry	213	N. E. Tel. & Tel. Co.	Tel.	..	511
Sutton	698	Merrimack County Tel. Co.	Tel.	..	509
Swanzey	1656	*Keene Gas & El. Co.	Elec.	A	347
		Keene El. Ry. Co.	St. Ry.	..	223
		American Tlg. Co.	Tlg.	..	449
		N. E. Tel. & Tel. Co.	Tel.	..	511
Tamworth	993	Chocorua El. Lt. Plant	Elec.	D	316
		Wonalancet El. Co.	Elec.	D	412
		Madison Local Tel. Co.	Tel.	..	499
		Ossipee Valley Tel. & Tel. Co.	Tel.	..	520
		Sandwich Local Tel. Co.	Tel.	..	531
		Kimball, S. O.	Water	D	609
Temple	284	N. E. Tel. & Tel. Co.	Tel.	..	511
		Wilton Tel. Co.	Tel.	..	548
Thornton	553	Western Union Tlg. Co.	Tlg.	..	455
		White Mountain Tel. & Tel. Co.	Tel.	..	545
Tilton	1866	Laconia Gas & El. Co.	Elec.	A	351
		Tilton El. Lt. & P. Co.	Elec.	C	398
		Western Union Tlg. Co.	Tlg.	..	455
		Citizens Tel. Co.	Tel.	..	472
		Winnepesaukee Tel. Co.	Tel.	..	550
		Tilton & Northfield Aqueduct Co.	Water	C	629
Troy	1331	N. H. Water & El. Power Co. of N. H.	Elec.	C	377
		N. E. Tel. & Tel. Co.	Tel.	..	511
Tuftonboro	612	Fairmount Tel. Co.	Tel.	..	487
		N. E. Tel. & Tel. Co.	Tel.	..	511
Unity	504	Claremont Power Co.	Elec.	A	310
		Lempster Tel. Co.	Tel.	..	497
		N. E. Tel. & Tel. Co.	Tel.	..	511
Wakefield	1543	Western Union Tlg. Co.	Tlg.	..	455
		Fairmount Tel. Co.	Tel.	..	487
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Wakefield Tel. Co.	Tel.	..	539

*Operating property of Ashuelot Gas & Electric Co., 294.

Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
Walpole	2668	Fall Mountain El. Co.	Elec.	A	325
		N. E. Tel. & Tel. Co.	Tel.	..	511
		Walpole Water & Sewer Co.	Water	C	632
Warner	1226	Contoocook El. Lt. Co.	Elec.	C	319
		Western Union Tlg. Co.	Tlg.	..	455
		Henniker Tel. Co.	Tel.	..	489
		Merrimack County Tel. Co.	Tel.	..	509
		West Hopkinton Tel. Co.	Tel.	..	544
Warren	701	Warren Water & Lt. Co.	Elec.	C	408
		Western Union Tlg. Co.	Tlg.	..	455
		White Mountain Tel. & Tel. Co.	Tel.	..	545
		Merrill, H. N.	Water	D	617
Washington	360	Washington & Cherry Valley Tel. Co.	Tel.	..	541
Waterville	16	White Mountain Tel. & Tel. Co.	Tel.	..	545
Weare	1326	Western Union Tlg. Co.	Tlg.	..	455
		Dunbarton Tel. Co.	Tel.	..	480
		Weare Tel. Co.	Tel.	..	542
Webster	445	Central N. H. Power Co.	Elec.	D	309
		Kearsarge Tel. Co.	Tel.	..	493
		Merrimack County Tel. Co.	Tel.	..	509
		West Hopkinton Tel. Co.	Tel.	..	544
		Winnepesaukee Tel. Co.	Tel.	..	550
Wentworth	595	Warren Water & Lt. Co.	Elec.	C	408
		Fairlee & Wentworth Tel. Co.	Tel.	..	486
		White Mountain Tel. & Tel. Co.	Tel.	..	545
Wentworth's Loc'n	51	Coos Telephone Co.	Tel.	..	486
Westmoreland	758	*Keene Gas & El. Co.	Elec.	A	347
		Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Whitefield	1635	Bethlehem El. Lt. Co.	Elec.	C	302
		Whitefield El. Lt. Co.	Elec.	C	410
		Western Union Tlg. Co.	Tlg.	..	455
		Coos Tel. Co.	Tel.	..	476
Wilmot	614	Western Union Tlg. Co.	Tlg.	..	455
		Kearsarge Tel. Co.	Tel.	..	493
		Winnepesaukee Tel. Co.	Tel.	..	550
Wilton	1490	Milford Lt. & P. Co.	Elec.	B	371
		Ware, Robert A.	Elec.	D	408
		**Abbott, P. J.	Gas	D	421
		Western Union Tlg. Co.	Tlg.	..	455
		Wilton Tel. Co.	Tel.	..	548
Winchester	2282	Connecticut River Power Co.	Elec.	A	316
		*Keene Gas & El. Co.	Elec.	A	347
		American Tlg. Co.	Tlg.	..	449
		Western Union Tlg. Co.	Tlg.	..	455
		Forest Lake Tel. Co.	Tel.	..	488

*Operating property of Ashuelot Gas & Electric Co., 294.

**Operations as public utility discontinued in 1914.

Location.	Pop. 1910.	Name of Company.	Kind of Service.	Class.	Report of com- pany. Page.
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		N. E. Tel. & Tel. Co.	Tel.	..	511
Windsor	24	Washington & Cherry Valley Tel. Co.	Tel.	..	541
Wolfeboro	2224	Western Union Tlg. Co.	Tlg.	..	455
		N. E. Tel. & Tel. Co.	Tel.	..	511
Woodstock	1083	Fox & Putnam	Elec.	D	330
		Western Union Tlg. Co.	Tlg.	..	455
		White Mountain Tel. & Tel. Co.	Tel.	..	545

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